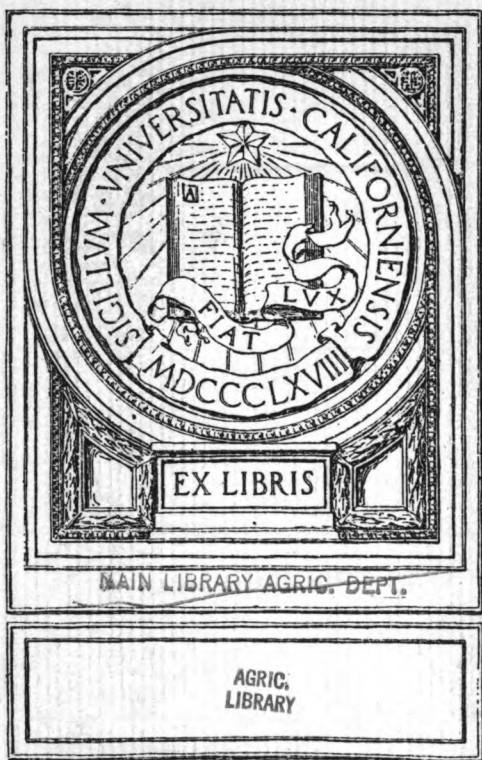




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THE
FLORICULTURAL CABINET,

AND

Florists' Magazine.

JANUARY TO DECEMBER, 1852.

Vol. 20

CONDUCTED BY

JOSEPH HARRISON.

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P R E F A C E.

THE close of each successive year, and with that the completion of another Volume of our Magazine, has been, and still is to ourselves a matter which produces serious reflection, and we assure our readers that on the present occasion it is with far more than ordinary feelings of gratitude that we enter upon our closing remarks in the present PREFACE — recollecting that it is the finish of the TWENTIETH VOLUME OF THE FLORICULTURAL CABINET, AND FLORISTS' MAGAZINE.

To have the honour of recording this fact, is in consequence of the great and continued kindness which we have been favoured with by our Correspondents, Subscribers, and Readers; and we most respectfully solicit their acceptance of our very sincere thanks, for that generous and liberal support which has been afforded us.

During the present year we have pursued with our Magazine the same course we had previously done, viz., to render it a source of floral pleasure and of useful information on everything connected with floriculture, avoiding anything distasteful or unedifying, and uniformly aiming to meet the requirements of all our readers. It is gratifying to us to state, that during the past year we have received many flattering testimonials of approval.

Our future exertions will be directed with every endeavour to improve upon the past; and we again respectfully beg the assistance of our

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readers, and with it we shall be enabled to realize more than our professions. We intend to insert a number of Designs of Flower-gardens, Grounds, etc. We do this in consequence of having recently received many private applications for such assistance. At all times we shall be highly gratified to meet the wishes of our readers; and having ascertained these, we reiterate the assurance that no practicable means of rendering our Magazine additionally and enduringly useful shall remain untried.

• “ Happy who walks with Him ! whom what he finds
Of flavour or of scent in fruit or flower,
Or what he views of beautiful or grand
In Nature, from the broad majestic oak
To the green blade that twinkles in the sun,
Prompts with remembrance of the present God !
His presence, who made all so fair, perceived,
Makes all still fairer. As with Him no scene
Is dreary, so with Him all seasons please.”—*The Task*.

UNIV. OF
COLUMBIA



TO THE
ARTIST

1. Queen Victoria. 2. Standard of Marengo.



ROSES.

1. QUEEN VICTORIA.
2. STANDARD OF MARENGO.

IT is an honour to have our first Number for the present year ornamented with portraits of "The Queen of Flowers," and more especially so, by one bearing the name of OUR BELOVED QUEEN VICTORIA, accompanied by that universally admitted "model form for all cupped Roses," THE STANDARD OF MARENGO.

"Allied by nature in your kind,
And differing but in hue,
You both possess intrinsic worth,
And outward beauty too."

It is related in *Fable* of the birth of the ROSE that Flora having found the corpse of a favourite nymph, whose beauty of person was only surpassed by the purity of her heart and chastity of mind, resolved to raise a plant from the precious remains of this daughter of the Dryads, for which purpose she begged the assistance of VENUS and the Graces, as well as all the deities that preside over gardens, to assist in the transformation of the nymph into a flower, that was to be by them proclaimed Queen of all the vegetable beauties. The ceremony was attended by the Zephyrs, who cleared the atmosphere, in order that Apollo might bless the new created progeny with his beams. Bacchus supplied rivers of "Nectar" to nourish it, and Vertumnus poured his choicest perfumes over the plant. When the change was complete, Pomona strewed her fruit over the young branches, which were then crowned by Flora with a diadem that had been purposely prepared by the celestials to distinguish the QUEEN OF FLOWERS.

Another mythological writer relates, that Rhodanthe, Queen of Corinth, to avoid the pursuit of her lovers, fled to the temple of Diana to conceal herself; but being besieged by lovers, and obliged to appear,

she called on the people for help, who, on beholding her beauty, threw down the statue of Diana, and declared her to be the goddess of the temple; upon which Apollo changed her into a Rose.

The Turks are great admirers of the Rose, and Musselmans, in general, believe that it first sprang from the perspiration of Mahomet, on which account they will not suffer a rose-leaf to lie on the ground, or permit any one to tread upon this sacred flower. Warriors crown themselves with garlands of Roses during their principal repast. Pliny tells us, that the delicate meats of the ancients were either covered with rose leaves, or their fragrant oil was sprinkled over. At a feast which Cleopatra gave to Antony, the royal apartments were covered with rose leaves to some depth. In Turkey a Rose is sculptured on the tomb of all ladies who die unmarried. Pope Julius the Second sent a consecrated Rose of Gold dipped in chrism, and perfumed with musk, to be presented by Archbishop Warham to King Henry the Eighth, at high mass, with the apostolical benediction. The king received the precious Rose, and still more precious benediction, with profound reverence and excessive joy. Mary, Queen of Scots, sent a magnificent rose-tree to Rosnard, the French poet of the sixteenth century, which was valued at two thousand crowns. Boyle relates, that at the baptism of Rosnard the following accident occurred:—

It was customary to bring large vases full of rose-water, and baskets of flowers to christenings; and as the nurse was going to the church with the infant poet she let her flowers fall, and in turning to recover them she touched the attendant who carried the vase of rose-water, and spilt it on the child; this was regarded as a happy presage of the *good odour* that would some day attend his poetry. Eastern poetry abounds in flowery allusions to the Rose. “You may place a hundred handfuls of fragrant herbs and flowers before the nightingale, yet he wishes not for more than the sweet breath of his beloved Rose.”

“Oh! sooner shall the rose of May
Mistake her own sweet nightingale,
And to some meaner minstrel's lay
Open her bosom's glowing veil.”—MOORE.

The island of RHODES (Greek, *Rhodon*, a Rose) took its name from the prodigious quantity of Roses with which it abounds.

Ludovica Verthema, who travelled in the east in the year 1503, observes, that he saw a great quantity of these flowers at Calicut, both red, white, and yellow; and Sir William Ouseley tells us, in his work on Persia, that when he entered the flower garden belonging to the governor of a castle near Fassa, he was overwhelmed with Roses. In Persia, wine and other liquors are brought to table with a Rose in the bottle, instead of a stopple or cork. Jackson says, that the Roses in the garden attached to the Emperor of Morocco's Palace are unequalled for quantity, and that mattresses are made of their petals for persons of rank to recline upon. We read in Father Catron's “*Historie of Mogul*,” “that the celebrated Princess Nourmahal caused an entire canal to be filled with rose-water, alongside of which she and the Great Mogul might walk, and the heat of the sun disengaging the

water from the essential oil of the Rose, this substance was remarked floating on the surface of the canal, and diffused a delightful perfume; and it was thus that the 'Otto of Roses' was first discovered."

In our own, as well as neighbouring nations, the Rose is held in high and yearly increasing estimation. It is deemed the "Emblem of Beauty;" "The Pride of Flora;" and to reign "Queen of the Flowers." It is also ENGLAND'S NATIONAL EMBLEM.

Poets of all nations have sung its praises, yet what poet has been able to do justice to a flower that is considered to be "the glory of the spring and summer," as well as "the ornament of the earth." They have celebrated its charms without exhausting its eulogiums, for its allurements increase upon a familiarity, and every fresh view presents new beauties, and gives additional delight. Hence it is said to renovate the imagination of the poet, and the very name of the flower gives harmony to his numbers, as its odours give sweetness to the air. As the Rose is the most common of all that compose the "Garland of Flora," so it is deemed the most delightful. And to paint this universal emblem of delicate splendour in its own hues, the pencil should be dipped in the "tints of Aurora" when arising amidst her aerial glory. Venus herself finds a rival in the Rose, whose beauty is composed of all which is exquisite and graceful.

It has been made the symbol of sentiments as opposite as various. PIETY has seized it to decorate her temples, whilst LOVE expressed its tenderness by wreaths, and JOLLITY revelled adorned with crowns of Roses. GRIEF strews it on the tomb, and LUXURY spreads it on the couch. It is mingled with our tears, and spread in our gayest walks. In EPITAPH it expresses youthful modesty and charity. The beauty of the MORNING is allegorically represented by it, and AURORA is depicted strewing Roses before the chariot of Phœbus.

"When morning paints the eastern skies,
Her fingers burn with roseate dyes."

It is supposed to have given name to the HOLY LAND, where SOLOMON sung its praise, as SYRIA appears to be derived from *Suri*, a delicate species of Rose, for which that beautiful country has always been famous, and hence called SURISTAN, THE LAND OF ROSES.

At what time the Rose was introduced into the gardens of our own country is uncertain. Chaucer wrote upon it being there five hundred years ago. It is evident, too, that the principal gardens of the kingdom, "in the early days," were attached to PRIORIES and other religious edifices, and from the luxurious manner in which the ROMANS lived in this country for many ages previous to the "year 400," and from their habit of wearing wreaths of Roses at their banquets, it is more than probable that their gardens contained collections of these beautiful flowers.

During the last twenty-five years there has been much attention paid to raising Seedling Roses, particularly in France, where the climate is very suitable for the process. Great indeed has been the success. Flowers of much more *decided colours* have been raised, some of which are intensely brilliant and showy. In size, too, much has been achieved.

And by the process of impregnating the flowers of various classes new sections have been formed of the productions, and now we can have, in the open air of our own country, Roses in bloom nearly all the year. The classes which bloom so freely during the latter part of summer and autumn are a most valuable acquisition. Another essential to be realized has been to obtain a *perfect standard* of form, one in *each* section of Roses, suited to its blossoms, and in this particular much has been effected.

The two new varieties we now figure are of the PERPETUAL CLASS, but apparently they are hybrids of *distinct sections*. They are of first-rate excellence, and ought to have a place in every collection, even in every garden.

1. PAUL'S QUEEN VICTORIA ROSE is a Seedling from the much admired "LA REINE," of which it is so exact a copy in every respect, save colour, that it has been designated by some the "WHITE LA REINE." The ground colour is white, overlaid with the most delicate hue of pink, and of a wax-like appearance. It is very distinct from any other Rose. Specimens of its flowers have been shown at the Floral Society's meetings in London during the past season, and from an half blown flower our artist has drawn the one we figure. The full blown flower is of good size, and will prove a charming companion to the higher coloured ones.

Mr. William Paul, Nurseryman, of Cheshunt, Herts, obtained this beautiful variety in the neighbourhood of Paris, and is now, for the first time, offering plants for sale.

2. STANDARD OF MARENGO ROSE is also an Hybrid Perpetual. It has been generally understood to have been a seedling from the splendid "Geant des Batailles." Some persons, however, suppose it to be raised from "Duc d'Aumale Rose." It was first sent out by Messrs. Guillot, of Lyons, in France, who also sent out the Geant des Batailles, but the present one much surpasses even that fine variety. It is superbly brilliant, fine form, petals stiff, and of thick substance, and very fragrant. It is the most splendid autumnal Rose in this country, and of unequalled shape.

NOTES ON NEW OR RARE PLANTS.

ABELIA UNIFLORA.—Mr. Fortune sent plants of this species to Messrs. Standish and Noble from China. It is a small erect shrub, of the natural order of Honeysuckles (Caprifoliæ), the flowers, as the name denotes, are produced single, in the axils of the upper leaves, each one about one inch long, and three-quarters of an inch across the mouth, white, with a slight stain of violet. Messrs. Standish and Noble consider it hardy. (*Paxton's Flower Garden*.)

ACER CIRCINATUM.—A most beautiful species of the Maple tribe, introduced from Oregon, by the Horticultural Society, perfectly hardy, growing from twelve to twenty feet high. When the leaves unfold in spring they are of a beautiful transparent green (but they are preceded by long leaf scales of a crimson colour), and the flowers at the same

time push out in tufts, white and purple. In the autumn the leaves turn to a deep crimson-red, which gives the tree a *splendid appearance*. It is an admirable tree for a pleasure ground, and viewed from the dwelling-house would have a fine effect. The wood is remarkably tough, and the smaller branches are used by the natives in making the hoops, &c., for their "*scoop-nets*," which are used for taking salmon in the Rapids, &c. (*Paxton's Flower Garden*.)

ACER VILLOSUM.—Introduced by Messrs. Osborne and Son, of Fulham, from the Himalayan Mountains of India. It is a fine tree, somewhat resembling the Sycamore, but the leaves are larger, thicker, and of a deeper green; in the autumn they die off a *nankeen* colour. The flowers are fragrant. It is considered one of the finest deciduous trees that has been introduced for many years. (*Paxton's Flower Garden*.)

AERIDES SUAVISSIMUM.—A delicate species of orchid, with fleshy, pink coloured flowers, each one about an inch and a half across, at the extremity of each of the sepals and petals is a spot of rose. The lip is pale yellow, tipped with pink. The raceme about a foot in length. It produces a most delicious fragrance. The plant flowered with Messrs. Loddiges, of Hackney, in June, 1849, who received it from the Straits of Malacca. (Figured in *Paxton's Flower Garden*, plate 66.)

ÆSCHYNANTHUS SPLENDIDUS.—An hybrid raised by Messrs. Lucombe, Pince, and Co., of Exeter. The flowers are three to four inches long, tube-shaped, of a bright orange below, and a vermillion above. They are produced in clusters of twelve to fifteen in each. (Figured in *Mag. Bot.*)

BEGONIA (DIPLOCLINIUM) SEMPERFLORENS.—A native of Brazil. The flowers are white, about an inch across, of no very great beauty, but it continues in flower for a considerable time, winter and spring, which makes it a very desirable plant. It grows about two feet high, and blooms freely. (*Paxton's Flower Garden*.)

BROMELIA LONGIFOLIA.—A native of Guiana, a stove plant, in Mr. Henderson's collection at Wellington Road Nursery. The flowers are produced in a large head-like rich rose-coloured cone, near six inches long, and almost as broad. It is one of the finest of the race. (Figured in *Paxton's Flower Garden*.)

CARRAGANA TRIFLORA.—From Nepal, and it inhabits the high Himalaya Mountains, similar to the Whin in our own country. It is a hardy half-evergreen shrub, the flowers are of the pea formed shape, yellow, borne in umbels of three together. It is in the garden of the Horticultural Society at Chiswick. (*Paxton's Flower Garden*.)

CEDRONELLA CANA.—A half shrubby hardy herbaceous plant from New Mexico, somewhat like the Stachys tribe. The flower stems grow two to three feet high, having long spikes of rosy-red blossoms, which are produced in numerous whorls. Each tubular flower is nearly two inches long, and from ten to twelve blossoms are in each whorl. The plant has many spikes of its blossoms, and blooms freely during the whole of summer, making a handsome appearance. It is a neat

compact growing plant, and deserves to be in every flower-garden. It is in the Royal Gardens of Kew. (Figured in *Bot. Mag.*, 4618.)

CHEIRANTHUS SPLENDIDISSIMUS.—This fine new Wallflower has long spikes of large blossoms, of a deep orange, shaded with brown. We have seen it exceedingly fine this season.

CROCUS VERNUS: VAR. LEEDSII.—Edward Leeds, Esq., of Manchester, has paid much attention to this lovely tribe of vernal flowers, and the present variety was one he raised and selected out of many thousands. The flower is of fine form, almost tulip shaped, petals stout, admirably rounded off at the top; they are of a rich deep violet-purple, edged with white, which produces a beautiful contrast. It is a vigorous and abundant bloomer, and ought to be grown, along with others, in every garden. (Figured in *Mag. Bot.*)

DAMARA OBTUSA.—A native of the New Hebrides, where it grows to a great tree. It is a coniferous tree, requiring to be in a greenhouse with us. The leaves are about four inches long, and one and a half broad, with the ends rounded off. The cone three inches long, by about two in diameter. (*Journal of Horticultural Society*.)

DENDROBIUM CUCUMERINUM.—This most singular orchideæ was received at the Royal Gardens of Kew from Australia, where it was found creeping and running prostrate over the trunks or branches of trees. The stems are branched about as thick as a small goose-quill, flexuose and jointed. The flowers are produced in racemes, three to five in each. Sepals and petals narrow, of a creamy-white streaked with purple. Each blossom an inch and a half across. The very remarkable feature of the plant is, that the leaves (or pseudo-bulbs) bear a most striking resemblance to small girkin-cucumbers, about an inch and a half long, and being produced in vast numbers, have a very interesting appearance. It thrives best in the Royal Gardens in a house, or pit, that has no more artificial heat than what just keeps out the frost. (Figured in *Bot. Mag.*, 4619.)

GEISSOIS RACEMOSA.—A native of New Caledonia, where it grows to a small tree, bearing the flowers, which are of a crimson colour, on the *old wood*, in racemes about a foot long, and the blossoms are packed closely together (similar to those of *Combretum grandiflorum*), with globular buds, four ovate leathery sepals, shaggy, with hairs in the inside, and eight stamens, with crimson filaments about an inch long, producing a most magnificent effect. It flourishes in the stove, and is considered the finest hothouse plant which has been introduced for many years past. It is in the garden of the Horticultural Society at Chiswick.

HESPERIS MATRONALIS FULGIDA PLENA.—This is a double Rocket, with flowers of a fine crimson. A very handsome acquisition to this pretty tribe, and will produce a striking contrast with the double yellow and double white. They merit a place in every flower-garden, and can be procured cheap.

KLUGIA NOTONIANA (Synonym, *Glossanthus Notoniana*, and *Wulfenia Notoniana*).—A native of the East Indies. A succulent herbaceous

annual plant, of a decumbent habit, producing roots at the joints of the underside of the stems. The flowers are produced in many flowered racemes. Each blossom is drooping, nearly an inch across, of a rich very deep blue, with yellow at its base. It blooms freely in the stove from September, in the Royal Gardens of Kew. (Figured in *Bot. Mag.*, 4620.)

LINDLEYA MESPILOIDES.—A half-hardy evergreen tree of small size, very much like *Mespilus grandiflora*. The flowers are white, an inch across, as sweet as the Hawthorn. Introduced by the Horticultural Society.

PENTSTEMON VARIABILIS.—Mr. Salter, of Versailles Nursery, has raised this pretty variety, we recently saw it in profuse bloom. The ground colour is of a light cream, shaded with rose, and streaked with crimson. Some of the flowers were wholly of a rose-red colour above, and cream colour beneath. In fact, as its title imports, the blossoms are very various. It is a pretty addition to this charming tribe.

PHILESIA BUXIFOLIA.—Messrs. Veitch obtained this half-hardy shrub from Chiloe. Mr. Lobb informed them, "In its native country it forms large masses on trunks of trees and rocks. It is a splendid thing, seldom found to grow a foot high. The flowers are produced near the ends of the shoots, they are bell-shaped, and are sometimes as large as the common Tulip, of a deep rose colour. The petals are thicker in substance than any other flower I have seen. I have traced it from the level of the sea to the snow-line, and it blooms more freely at a great elevation." (*Journal of Horticultural Society.*)

SAXIFRAGA FLAGELLARIS. SPIDER-LEGGED.—Captain Penny, commanding the ship "Albert," in the expedition in search of Sir John Franklin, and his intelligent medical officer, Dr. Sutherland, collected in the Arctic regions a box full of various living plants at Cornwallis Island, and sent them to the Royal Gardens of Kew but a month ago. Among them was this curious and rare Saxifrage in a *flowering* state. It is a diminutive plant, and from the small carrot shaped root there diverges, in all directions, a number of thread-like stolones (stalks), each bearing young plants at the extremity, which sends down radicles into the ground, and thus plants a colony of new individuals around the parent. From the crown of the root rises an erect leafy *stem*, with crowded roseate leaves. At the summit of the stem is sometimes a solitary blossom, and sometimes a cluster, or umbel, of from three to five. Each blossom is about three-quarters of an inch across, of a *bright yellow* colour. It inhabits, too, Melville Island and Behring's Straits, and is generally buried under snow for ten months in each year, in a dormant state. The sailors of the Arctic Expedition gave it the appropriate name of the Spider-plant. (Figured in *Bot. Mag.* 4621.)

THE AUGUSTA ROSE.—Messrs. Thorp, and Co., Nurserymen, of Syracuse, New York, have obtained a very superb *yellow* flowering *climbing* Rose. They state, "the flowers are of a deeper yellow than those of the Cloth of Gold Rose, and deliciously fragrant. It is a

vigorous climber and *profuse* bloomer. Plants of this valuable acquisition we expect soon in England."

THE AMAZON, Scarlet Geranium (*Pelargonium*).—Rich scarlet, trusses large, petals thick substance, and of excellent form. It is in Messrs. Low and Co.'s collection at Clapton Nursery.

ULLUCUS TUBEROSUS (Synonym *Basella tuberosa*).—A native of Peru, where it grows on the mountains. The inhabitants eat the tubers, which are about the size of a nut, and some of them were sent into this country when the disease was so prevalent among the potatoes, with an expectation that it might prove to us an excellent substitute. The tubers are of a rich yellow colour, of firm and waxy substance. It is a succulent herbaceous plant, growing luxuriantly in the open ground in summer. The tubers require to be treated as is done to the potato. The flowers are small, yellow, produced in short racemes. (Figured in *Bot. Mag.*, 4617.)

WEIGELIA LUTEA.—The handsome *W. rosea* has now a pretty companion in this yellow-flowered one, both deserve a place in every shrubbery, or trained to a wall; in a warm place they bloom profusely and beautifully.

Plants now in bloom in the Royal Gardens of Kew, and other places visited.

ACACIA UNDULÆFOLIA.—Leaves small, oval; and the flowers are produced in long spikes, very numerous, of a rich yellow colour. A neat plant of great beauty when in bloom.

A. UROPHYLLA.—Leaves broad; the flowers in branching panicles, white.

A. SMILACIFOLIA.—Leaves small, willow-leaved, and the flowers borne profusely, white. These contrast prettily with the yellows.

A. ERIOCARPA.—Neat small foliage, and the blossoms of a rich yellow, produced in profusion. Very pretty.

A. SQUARROSA.—Leaves small. Flowers in large heads of a deep yellow.

A. BIFLORA.—Very neat small foliage, and blooms freely, the blossoms a rich yellow. Very handsome.

A. PENDENS.—Leaves small, branches drooping, flowers sulphur colour. Neat and interesting.

EPACRIS AUTUMNALIS.—Tube of flower one inch long, a vivid crimson. Very handsome.

E. MAGNIFICENT.—Tube one inch long, of bright rosy-pink, tipped with white. Handsome.

E. NIVEA.—Three-quarters of an inch long, bell-shaped, white. Very pretty.

E. ARDENTISSIMO.—Tube one inch long, of a rich brilliant crimson, tipped with pink. Blooms profusely, very showy.

E. SPLENDIDA.—Bell-shaped, half an inch long, bright rose, tipped with white. Very pretty.

E. HYACINTHIFLORA.—Bell-shaped, three-quarters of an inch long, of a bright rosy-pink, and in profusion. Very handsome.

E. HYACINTHIFLORA CANDADISSIMA.—The form and size of the next previous one, white, in profusion. It is a charming contrast to that variety. Also *E. grandiflora*.

ERICA CERINTHOIDES MAJOR.—By stopping the shoots, this otherwise naked grower becomes a handsome bush, and we have seen a plant having about three dozen heads of its rich scarlet hairy blossoms, each an inch long. It is very handsome.

E. LAMBERTIANA.—The blossoms are nearly globe-shaped, about a quarter of an inch across, of a pretty light pink. Neat and pretty.

E. VERNIX.—The flowers are about the size of the last one, but of shining orange, with green end, which turns black. Very pretty.

E. COLORANS.—Tube three-quarters of an inch long, white; but the flowers become a deep rosy-pink. They are produced in long spikes, in profusion. Very beautiful.

E. MAMMOSA MAJOR.—The tube is an inch long, white below, and the other part a bright pink. They are produced in large clusters, terminating by a slender shoot. It is very handsome.

E. HYEMALIS.—Tube somewhat bell-shaped, three-quarters of an inch long, the lower part of a rosy-purple, and the end white. Produced in profusion in conical spikes. Very pretty.

E. WILMOREANA.—Tube one inch, rose colour, with a white end; in profusion in long spikes. Very neat and handsome.

E. CAFFRA.—Flowers globular, very small, white, and fragrant. They are produced in such profusion as to appear almost covered with bloom. Very pretty.

E. GRACILIS.—These flowers are a little larger than the last described, of a bright rosy-purple, as profuse as the last, and contrasting nicely together.

E. LINNÆOIDES SUPERBA.—Tube an inch long, purple, with a large white end. Borne in spikes in profusion. Very handsome.

E. ARBUSCULA.—Small, globe-shaped, a rich rosy-lilac, in profusion, covering the plant.

CORRÆA BRILLIANTA.—Tube one inch and a half long, bright red, with a yellow end. Very handsome.

C. SPECIOSA GRANDIFLORA.—Tube one inch and a half long, wide, rich crimson, with green end. Very fine.

C. OCHROLEUCA.—Tube one inch, pretty straw colour. Very neat.

C. DELICATA.—Tube one inch and a half long, white, tinged with rosy-purple. Very neat and pretty.

C. ROSEA-SUPERBA.—Tube wide, one inch long, rose, with white end. Very pretty.

The *Corræas* are fine things to ornament, during winter, the greenhouse, or sitting-room. Easy to cultivate and free bloomers.

WILLMORE'S SURPRISE PELARGONIUM.—Said to be a Seedling raised from the *P. Erubescens*, impregnated by a Hollyhock. The structure of the plant is different to anything yet seen in the *Géranium* tribe. The roots are quite unlike any of the class, and the seed-pods are formed more like a Hollyhock than a *Pelargonium*. The flowers

are semi-double, and the whole truss of a monstrous form. It is a gay border, or bedding, flower.—Messrs. Lee, of Hammersmith, intend to offer it for sale next August.

GESNERA HERBERTII and *ZEBRINA* now bloom beautifully in the Kew collection, also *Achimenes picta*, *Ixora coccinea*, and *Javanica*. *Chirita Moonii*, *Luculia gratissima*, in the greenhouse. *Rondeletia speciosa* major, with its rich scarlet and yellow blossoms, the size of a sixpence, in large corymbose heads, are beautiful. *Coronilla glauca* is a very ornamental greenhouse plant at this season, its bright yellow heads of pea-formed flowers have a gay appearance. The double white and red Chinese Primroses are now very beautiful, also the single. *Cyclamen persicum*, too, is now a pretty object. A new variety named *C. persicum rubrum* has recently been raised, it is a pretty addition, obtained by Mr. Henderson.

ARBUTUS (Strawberry Tree).—At some of the nurseries around London plants are grown in pots, and having them placed in a warm situation out of doors to encourage their production of bloom and fruit, they are now most beautiful objects. Plants from two to four feet high are almost burdened with their rich coloured fine strawberry like fruit, and have a delightful appearance. Purchasers have them for balcony and window ornaments, and being classed along with *Laurustinus*, in bloom, they have a nice effect, either there, or occupying vacant beds near the dwelling-house. Similar attention too with the scarlet and yellow-berried *Hollies*. Broad and narrow-leaved Spindle trees, which bear a vast profusion of scarlet and orange coloured fruit, are equally successful, and those intermixed with the *blue-berried* Mahonias, Berberises, and Snowberries, have quite a gay and cheerful appearance. Also *Cotoneaster microphylla*, crowded with its rich red fruit, as also the *Pyracantha*. Plants grown in pots, plunged to the rim in a border of warm aspect, and watered as required, would cost but little either for stock or after attention, amply repaying for both, and are a charming succession to the *Chrysanthemums*.

FUCHSIAS AND VERBENAS.

BY ORION.

A CELEBRATED florist remarked only the other day, that “never was there so barren a season for the above-named flowers, as regards *novelty* or *improvement*, than the one just brought to a close,” and this is evidently very near the truth. What is the reason of this retrograde, or at most stand-still “progress?” to use a Hibernian phrase; is it because seedling raisers were afraid of sending their productions to the self-styled “National” tribunal? Were they afraid of not receiving an impartial judgment on their flowers? or did the floricultural world view, with suspicion, the establishment of a new society composed principally of “men in the trade?” It may have been for one or more of these reasons, but the fact is the same, there is nothing very good or novel to be sent out in the spring, 1852. It will very likely be said, that, owing to the establishment of the National, many flowers that would have been thrust on the generally too easily gulled public will

now be kept at home (their proper place), but it has been proved, over and over again, that flowers without any merit or public character do sell as well, and, in some instances, even better than notorious seedlings that have received perhaps three prizes, and no end of first-class certificates. As well might the public be cautioned against buying the numerous "patent quack medicines," unless each was proved by a jury of twelve or twenty physicians, as to say do not buy any new advertised flowers, unless they "went through the ordeal at the National;" but, at the same time, while making these remarks, it must not be understood that public exhibitions are included in these censures, it is the absurdity of the prize system which works so badly, as instanced in the *Great Exhibition awards particularly*, though such unusual care was taken to form impartial juries. What is wanted are well supported public shows, where the public may SEE and JUDGE for themselves. It often happens that those flowers which are not rewarded at all prove the most useful and best selling plants, and there are very many persons who have made a good resolution never to buy anything until they actually see it; indeed it is too common to hear, "I was so taken in with such and such a flower, though it had so many prizes, and backed by high recommendation, that I will see all before I buy for the future." That there are many good things sent out without any high recommendation no one can deny, and it may be as fearlessly asserted that many plants have been condemned, and even put under the tables to be afterwards highly extolled, and even to distance everything else as favourites with the public. To take a recent instance, ask a candid fair dealing florist what Fuchsias have been mostly inquired for the last year or two, and, in nine cases out of ten, the reply will be *Mayle's*, yes, the very ones which were actually placed under the tables at one of the Metropolitan Exhibitions. *Diadem of Flora* is at present unrivalled, the calyx might be more reflexed, and the corolla darker. *Hebe*, or *Alba reflexa*, as Mr. Glenny named it, has a splendid reflexing calyx, but a very bad corolla. *Lady Dartmouth*, on the contrary, has a good corolla, and a calyx which does not even expand at all. *Bride* is after the style of *Diadem*, but only a bad imitation of it, and certainly ought not to have been sent out in the same set. The dark varieties, *Champion of England*, *Standard of Perfection*, and *Prince of Wales*, stand before everything else, except *Unique* and *Igneæ*, but beating them for habit and freedom of bloom; and it may be safely asserted that it will be a long time before a better batch appears, though everything and everybody, but the parties interested, conspired together to prevent their becoming the popular varieties they now are. *Nicholls' Prince Arthur* is another fine variety sent out without any strong recommendations. *Sir John Falstaff* is chiefly celebrated from its being so unlike any other, its great substance makes it popular, like the merry originator of the name. *Clapton Hero* has a splendid corolla, perhaps the darkest yet of any out. The good effect of a light calyx, and a very dark corolla, may be seen by placing the petals of this variety inside the already hollowed out calyx of *Hebe* or *Prince Arthur*; a flower producing this contrast would indeed be "the summit of perfection," however by perseverance it may yet be obtained.

Banks's *Expansion* is pretty but not grand. *Conspicua* seems to differ little from *Prince Arthur* (is there any distinction?). *Voltigeur* is fine as regards colour, but are not the sepals curved to too great an angle for true elegance, of which the *Fuchsia* seems a type. Smith's *Sidonita* is a novelty, and on that account popular, but the colours are not very desirable. *Stanwelliana*, though old, is still worthy of notice. *Splendida* and *Ne plus ultra* are good, if small. *Kossuth* large and coarse, and *Orion* as bad. A few of Henderson's are passable, as *Madame Sontag*, but no more need be mentioned, the above are sufficient. Verbenas in your next Number.

A DESCRIPTIVE LIST OF THE MOST ORNAMENTAL SPECIES AND VARIETIES OF THE CRATÆGUS, OR HAWTHORN.

AWARE that many of our readers are unacquainted with a vast number of beautiful new, "or rare," trees and shrubs, which are admirably suited to ornament the shrubbery, pleasure ground, or lawn, we purpose inserting a descriptive list of some of them in successive Numbers of our Magazine, with a view to assist our readers in making a selection to improve their collections.

It now being the proper time to plant the charming tribe of Hawthorns, we therefore give a list of such as are most beautiful, either for flowers, fruit, or foliage, and which merit a place wherever it is practicable to give them one.

The Garland of Flora does not possess a more charming blossomed race than the Hawthorns, nor that yield a more grateful perfume, and whose beauty too is extended, in many instances, from an early period of the year up to its close; the flowers enlivening and refreshing the spring and summer, and the varied beautiful coloured fruits adorning the autumn and winter. On these and other accounts they are estimable. The ancients so considered what they possessed even some thousands of years ago. The Hawthorn was then made the EMBLEM OF HOPE, and the young and beautiful Athenian girls brought branches, in bloom, to decorate their companions and friends on their wedding-day, whilst they carried large boughs of it to the altar. The altar too was lighted with torches made of the wood of this tree, and it formed the *flambeau* which lighted up the future home.

CRATÆGUS APIFOLIA, Parsley-leaved.—A low spreading tree from Virginia and Carolina, introduced in 1812; flowers white, May and June; fruit scarlet; ripe in October, small; height fifteen to twenty feet. The leaves turn a rich yellow when decaying.

C. ARONIA.—An erect branched tree, introduced in 1810 from Greece and the Levant; flowers white, in May and June; fruit the size of a marble, yellow, agreeable to eat, produced numerously; ripe in August and September; it hangs upon the tree till the leaves drop, often till December; grows fifteen to twenty feet high. A very ornamental species.

C. AZAROLUS.—A low tree, introduced from the south of France in

1656; flowers white, from May to June; fruit, size of the last named species, red; ripe in September; height fifteen to twenty feet. *Very ornamental.*

C. COCCINEA.—A low tree from North America, introduced in 1683; flowers white, in May and June; fruit rather large, scarlet; ripe in September; height fifteen to twenty feet. The leaves die off *yellow and scarlet.*

C. CORDATA.—A close-headed tree, introduced from Virginia in 1738; flowers white, in terminal corymbs, numerous in May and June; fruit scarlet, small; ripe in October; twenty to thirty feet high. Leaves a deep glossy green.

C. CRUS-GALLI.—A low tree from the banks of rivers in North America, introduced in 1691; flowers white, in May and June; fruit rather small, when ripe a bright scarlet; ripe in September, and retains its fruit through the winter. In the South of England it is nearly evergreen, retaining its glossy dark-green leaves much longer than any other species. Spines long, and bent towards the end like the spur of a cock; height fifteen to twenty feet.

C. DOUGLASII.—A shrub, or low tree, introduced from the Northwest of America in 1827; flowers white, in May; fruit middle sized, *dark purple*, numerous; ripe till August; leaves in the autumn are of a leathery shining texture, and die off early to a purplish hue; ten to fifteen feet in height; a very distinct and ornamental sort.

C. FLAVA.—A spreading tree of about fifteen to twenty feet high, introduced from North America in 1724; flowers white, in May and June; fruit *yellow*, long, pear-shaped; ripe in October. Leaves decay a deep yellow.

C. HETEROPHYLLA.—A desirable species, probably an hybrid raised between the *Hawthorn* and *C. azarole*. Its flowers are white, produced early, and in great profusion; it retains its fruit and foliage till the autumn frosts; fruit rich deep crimson, oval; height fifteen to twenty feet.

C. LOBATA.—Introduced in 1819, supposed from America; flowers white, produced in loose corymbs, from May to June; fruit *green*, medium size; ripe in October. It forms a low spreading tree.

C. MACRANTHA.—An open, vigorous, growing tree, very common in the Northern States of America, introduced in 1819; flowers white, from May to June; fruit scarlet, shining.

C. MAROCCANA.—A handsome pyramidal tree, from twenty to thirty feet high, introduced in 1822, a native of Palestine; flowers snowy white, very fragrant, in May and June; fruit scarlet; ripe in October. The leaves in mild seasons are produced very early, sometimes in the month of January, they are also shed very late. It is one of the handsomest species in cultivation.

C. MEXICANA.—A very handsome species, ten to twenty feet high, and when planted against a wall it retains its leaves through winter; as a standard it is only sub-evergreen; introduced from Mexico in 1824; flowers large, white, in June; fruit rather *larger than a marble*, when ripe pale yellow (not eatable).

C. NIGRA.—A low tree, a native of Hungary, from whence it was

introduced in 1819; it produces numerous suckers, and soon covers the surrounding ground with a thicket of bushes, but when grafted it forms a very handsome tree; flowers white, in April and May; fruit black, medium size; ripe in July and August; leaves produced in mild seasons in February or March; height twenty to thirty feet. A very distinct species.

C. ORIENTALIS.—Introduced in 1810 from the Levant, a low spreading tree; flowers white, in May and June; fruit *bright coral-red*, as large as a *marble*, produced *very numerously*, agreeable to eat; ripe in September, and remain upon the tree until after the leaves. A very handsome species.

PRACTICAL EXPERIMENTS MADE, AND THE END SOUGHT FOR OBTAINED.

BY MR. H. STILWELL, OF PINE APPLE NURSERY, EDGEWARE ROAD, LONDON.

It has been my lot of late to have to do with, and manage, a great number of gardens in and near London; and in so doing I have often been requested to look at the Standard Roses, the cry having been, "Do you, Sir, know, three or four, or more, of the Roses planted last year died." I have inquired as to the time they were planted, and have discovered that in nineteen cases out of twenty, "they were planted in spring, and some as late as April." And why has this been done? because the parties wished to have the Roses to look at through the summer, as they could not bear to see the garden without flowers, and by having only *in spring* determined to have a supply, the late period of planting had operated injuriously on the Roses *then* put in, and failures have followed, and from this circumstance the nurseryman is blamed for (it is said) supplying bad plants; and, in many cases, has to make good the failures by gratuitous substitutes the following *season*. I do not say following YEAR, for my opinion is, we should be careful about *the time* of planting the Rose, as well as many other plants which I shall hereafter notice.

The Rose, like many other plants, I find push their *new roots* into the earth "directly after the formation of the buds on the branches," which most clearly demonstrates that we should attend to the planting business as near to the middle of November as circumstances will admit of; this period is most certainly the best for a successful growth. If we let the sap begin to move, and the formation of *new roots* to have commenced, it operates most injuriously against the plant's establishment, how much more so when planting is deferred till, say February or March, when the new roots will by that time have pushed some length, they then receive a check, which in multitudes of cases prove past recovery. Some writers upon, and growers of, Roses have stated, "Roses will do well if planted in March;" I say they will succeed very far better when planted in autumn, and the new shoots will be vigorous, so as to produce a display of full blown flowers the first succeeding summer or autumn, and this is rarely the case when spring planting is resorted to. I have remarked when late planting

takes place, succeeded by dry weather, in order to get the plant to push at all, or if pushed to keep it alive, that a liberal supply of water at the roots is generally given, and this undue supply very often hastens the death of the plant, glutting the roots with wet, which hastens its destruction.

There are four things which must be observed : 1st. Make the hole in which the plant is to be placed large enough to extend the roots fully. 2nd. Do not plant *deep*, but have the roots tolerably near the surface-soil, so that food may readily be supplied from above. 3rd. Let each standard plant have immediately a stake, to which secure it, and prevent its being loosened at the roots by wind, or they will be prevented pushing afresh into the soil ; first fix your stake, and then place the Rose thereto, and fill up with soil, and you will avoid damaging the roots. 4th. Have a liberal supply of *well decomposed* manure, that from the cow-yard is preferable, being of a cooler nature.

THE LAURUSTINUS.

“ Now blooms, all amid the rigours of the year,
In the wild depth of winter, while without
The ceaseless winds blow ire.”

FLORA garnishes the cymes of the Laurustinus with hardy and modest flowers, which seem to say, “ I’ll tarry with you till your friends return, and cheer the scene with my pale pink buds and pure white petals,” with which it ornaments the shrubbery from November’s dreary month to the time that Boreas lends to March his strongest breath. We know not how this pretty winter flower stands in the floral language of the Turks ; but we find it emblematical of those British fair who desert the brighter scenes of society to cheer the sorrowing day of the lone widow, or cause the bereft parent to mourn his lost hope with less anguish. We will welcome thee, therefore, little Laurus, in the shrubbery, even when the queen of flowers displays her blushing and odorous petals to the sun, because we know thou wilt come with all thy charms to make our winter walks more gay : and much it must be regretted that thy mild charms could not detain the great Napoleon to thy native Elba ; then many a widowhood would have been prevented, and the name of Waterloo happily never known to the fatherless child of many a sorrowing mother.

The Laurustine grows naturally also in many parts of the south of Europe, Spain, Portugal, and it is likewise found wild in Barbary. Old authors give it the name of Laurustinus, from a supposition that it was a smaller species of the bay, *laurus* ; they, therefore, added the word *tine*, or tiny, small.

We are not able to state the exact time when it was first introduced to this country ; but Gerard says, in 1596, that it then grew and prospered very well in his garden at Holborn. He calls it the “ Wilde Baie-tree,” and “ *Laurus tinus*.”

MISCELLANEOUS SECTION.

ERYTHRINA CRISTA GALLI.—Of the many plants that adorn our stoves, one of the most handsome is the coral-flowered *Erythrina*: the brilliancy of colour, the length of its racemed flower-stems, and its beautiful dark-green foliage, render it a most desirable object for the conservatory, when in bloom. Having grown this plant with success to the height, of from seven to nine feet, with from seven to ten stems on a plant, literally covered with flowers, I am induced to offer a few remarks on its cultivation; and if my practice is followed out, the result will amply repay all trouble in its becoming an object of great beauty. After the plant blooms, the stems gradually die down, when it naturally requires a season of rest. According to the time that it is wanted to flower again, shake all the old soil from the roots, and re-pot it in a small pot; then plunge it into a gentle bottom-heat. In a short time it will begin to push out shoots; let these grow to the length of six inches; then select as many strong shoots at an equal distance as you want. If the plant is four or five years old, retain eight or nine stems, and cut the others out close to the root; they will form eyes for next year. Should your plants be young, and only break one or two shoots, pinch off the top when about six inches high, and you will get four or five in their place: they will bloom as free, only not so strong. The soil I use is a strong rich yellow loam two parts, one part rotten cow-dung (if that is not to be had, old mushroom-bed dung will do), and one part peat. Sift the finest out, as the rougher the soil the better; and when mixing it, throw in a portion of silver or river sand to make it porous. When your plant has filled the pot with roots, shift it into the pot you intend it to bloom in; the size I use is fifteen inches by sixteen: crock it well, and lay a little moss or dry leaves over the crocks to prevent the soil from filtering into the drainage, which is very essential in all plant growing. After potting, give a good watering to settle the soil, and place the plant in bottom-heat again till it makes fresh roots, and begins to grow; then a moist warm place in the stove will suit it best. But by all means keep it growing, and allow no check from want of water, as it requires much water, being a gross feeder. Water with diluted soot-water or manure-water, two quarts to four gallons of pure water. If the plant is kept growing it will soon attain the height I have named. Before flowers expand, or soon after, move the plant into the conservatory or greenhouse. Should a young stock of plants be wanted, the weak shoots thinned out should be placed in pots of peat and silver sand of equal parts, and placed in bottom-heat under a bell-glass; they will readily strike, and when potted off keep them growing fast all summer, and even if possible till the following year, when they will have strong roots. They may afterwards be grown and bloomed in the manner I have stated almost at any season of the year, only the flowers in winter are not so brilliant.—*J. F. Roberts, Botanic Garden, Chelsea. (Gardeners' Journal.)*

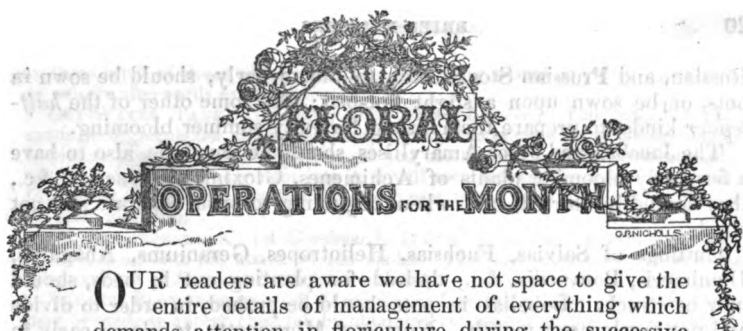
HORTICULTURAL SOCIETY MEETING, REGENT STREET, DECEMBER 2, 1851.—The following articles were exhibited:—From *Charles Ewing*, gardener to O. F. Meyrick, Esq., of Bodorgan, in Anglesea, Wales,

models of garden walls, constructed of upright flat irons and glass, which were much admired. From *Mr. Lawrence*, of Parliament-street, London, common garden watering-pots, with globe-shaped roses. These are found to disperse the water better and quicker than the old-fashioned rose. *Mr. Snow*, gardener to Earl de Grey, sent blooms of a beautiful seedling *Epiphydum*, raised between *E. Russelianum* and *E. truncatum*, a much deeper colour, and better formed than either of the parents. *Mr. Salter*, of Versailles Nursery, sent a collection of the *Pompone Chrysanthemums*, the produce of crosses between the *Clusan Daisy* and some of the larger kinds of *Chrysanthemums*, some of which are very handsome. *Mr. Higgs*, gardener to J. Barchard, Esq., a fine cluster of the fruit of *Musa Cavendishii*, the cluster consisted of ninety-two fruits, most of which were ripe, and being cut up and eaten proved to be very good. This was from the dwarf variety of this *Musa*, which is better adapted for small stoves. From the Garden of the Society, *Muraltia heisteria*, three *Epacris*, *Erica hiemalis*, *Beaufortia decussata*, and some of the *Minima* and other *Chrysanthemums*, none of which were named. *Mr. Van Houtte* sent them, with only the numbers, to the garden.

ON GROWING AND REPLANTING CONIFEROUS TREES, &c.—That plants from the nursery squares are the best, no one will, I think, doubt, if nurserymen would guarantee their safe removal. This, however, would be unreasonable to expect, as few of the choice kinds of *Pinus* will move with that safety when they attain a large size as to warrant them doing so. It is by cultivating them in pots or crates that nurserymen can guarantee the safe removal of specimens of a large size, where immediate effect is wanted, and warrant their obtaining such prices as are frequently given, viz., ten, fifteen, and twenty guineas for specimens of the rarer kinds of *Coniferæ*; and without some such system, many a fine specimen would have been lost to the country, as failures from the open borders would have been many and often. This, naturally enough, led to the cultivation of the rarer kinds of *Coniferæ*, especially in pots or crates; and when care is taken with them from their earliest stage, it may be safely followed without any ultimate detriment to the maturation of the tree. The following is the plan adopted by the Messrs. Knight and Perry, of the King's-road, Chelsea, and Messrs. Lucombe, Pince, and Co., of the Exeter Nursery, and some few others who cultivate this class of plants extensively, which I consider to be the happy medium. Although it is attended with a great deal of trouble and expense, yet the result has been most satisfactory:—They take seedlings of *Pinus insignis*, *Abies Douglasii*, *Cedrus Libani*, and many others of the more plentiful and hardy varieties, from the seed pan or bed, and plant them in nursery rows ten inches apart, in the lines about the same, in a mixture of peat and the common garden loam. Here they are allowed to make their summer's growth, and in October they are taken up, potted, and placed in a cool frame, and kept close until they make fresh roots, when they are ready to send out to their respective customers. In the spring, those that are not sold are again planted out and similarly treated, with more space allowed them in the rows (reserving a few of each

sort in pots for the summer's sale), and so they continue until the plants attain such a size as to render it inconvenient to house them. In the latter firm they have open boxes or crates made from eighteen inches to two feet square, and as much in depth (according to the size of the plant), made of elm, one inch and a quarter thick and three inches broad. These are nailed to corner pieces, two feet long, and about four inches broad, leaving alternate openings three inches wide, for the emission of roots into the borders where they are planted. In these crates they have plants from ten to fifteen feet high, which can be moved at any season with the greatest safety, as I can testify, having had occasion to remove a *Pinus insignis*, ten feet high, and nearly as much through, in the month of June, which was done without the slightest injury to the plant, although we had had little or no rain for nearly two months previous. I have planted a *Pinetum* here this spring, nearly ten acres in extent, with plants supplied by the latter establishment; many of the specimens are from eight to ten feet high, and, with *one exception*, without a failure, after having travelled between three and four hundred miles by rail, which took ten days to accomplish. Some of the specimens cost my employer from seven to ten guineas each, which had been grown in these crates, and had they been taken from the open borders he would not have risked as many shillings, especially having to travel so far; nor would that firm, on the other hand, have guaranteed to replace every failure. I have seen a plant of the *Pinus insignis* make a shoot six feet three inches long the second season of removal from one of these crates. It can be seen at Shugborough Park, near Crediton, the seat of J. Hipplesey, Esq.—*C. S., Hazelwood Castle, York. (Gardeners' Journal.)*

FUCHSIA SERRATIFOLIA, and the varieties *FLORIBUNDA*, and *ALBA*, are very valuable winter blooming plants, being highly ornamental for the greenhouse, or sitting-room, from October to the end of March. When the plants have done blooming, cut back the shoots, shorten them and insert the cuttings in sand, place in bottom peat. They soon strike root, pot off into a rich loam well drained, and encourage their quick growth. In July turn the plants out of pots into a warm situated border, soil being tolerably dry, by the middle of October the young flower will be visible, then take them up entire, and repot into a rich compost well drained, placing them in a close frame or pit for a week or two, then remove them to bloom in the greenhouse or sitting-room, and they will be highly ornamental from the beginning of November to March. When these have done blooming, cut in as before stated, and turn the plants into the open ground, repotting them in October. These old plants bloom more profusely than the young ones. Every attention is most amply repaid.



OUR readers are aware we have not space to give the entire details of management of everything which demands attention in floriculture during the successive months of the year; we must, therefore, condense all subjects, and give but the essentials of the most important tribes of flowers, &c.

IN THE FLOWER GARDEN.

Roses and Hollyhocks should be planted immediately, or will not bloom well this year. Add *fresh loam* to flower-beds, it always promotes an abundance of flowers, also give manure, leaf mould, &c. Frost paves the path for it to be done without injury to walks or grass. Have all standard Roses, and other like growing plants, well secured by a stake. Nothing is equal to THE ROSE GIRDLE, sold by Mr. Hamilton, 156 Cheapside, cheap and valuable.

FLORIST'S FLOWERS.—Auriculas and Polyanthus should only be kept *just moist* (not wet), and be *just preserved* from frost. If the embryo flower be affected by frost, it is always injurious; give air, however, on every likely occasion. Sow seed early this month. Carnations, Picotees, and Pinks in pots require to have air freely, but water sparingly. Protect from excess of rain. Prepare compost for the former now.

Pinks and Pansies in beds require that the lateral branches are secured by pegs, from injury by wind; and if it comes on very severe, place a flower-pot over each, taking care to remove them on the first favourable change. Fir or Yew branches, a foot or so high, pricked round or in the bed, is an excellent protection from wind. A sprinkling of soot over the bed tends to preserve Pinks from rabbits and snails.

Ranunculuses and Anemones planted last autumn protect from frost. The bed for planting in *next month* should now be turned over for the last time; pick out all worms, and give it a slight sprinkling of lime; then spread the bed evenly, and it will be consolidated by the planting period. Choice Hyacinths protect, an inverted garden-pot will do. Dahlia roots stored safely from frost are not necessarily secure from decay. The best sorts, if a large stock is desired, will now require potting and placing in the frame. Tulips still guard from frost, for they rarely throw up perfect blooms if touched by frost. Divide and replant herbaceous perennials, &c. If autumn sowing of annuals was omitted, now sow some in small pots, place them in a frame, and turn them out in the beds early in April: such will bloom early.

IN THE FORCING STOVE.

Sow seeds of tender annuals, as Cockscomb, Amaranthus, &c., to have them fine specimens for the greenhouse in summer; and Ten-week,

Russian, and Prussian Stocks, &c., to bloom early, should be sown in pots, or be sown upon a slight hot-bed; also some other of the *half-tender* kinds, to prepare them strong for early summer blooming.

The Jacobææ and other Amaryllises, should be repotted; also to have a few early blooming plants of Achimenes, Gloxinias, Gesnerias, &c., they should be started, and when beginning to push, separate and pot singly.

Cuttings of Salvias, Fuchsias, Heliotropes, Geraniums, Anagallis, Hemimeris, Bouvardia, &c., desired for planting out in beds, should now be struck. Lobelias in pots should be pushed, in order to divide and pot singly next month. Now sow Mignonette, to bloom early in boxes or pots, or to turn out in the open borders. Sow in pans seeds of Rhododendrons, Azaleas, Ericas, &c.

IN THE GREENHOUSE, &c.

If Camellias are not regularly supplied with soft, not too cold water, the buds will drop; if too much frequently, that will cause them to drop too. Thin the flower-buds if crowded. Never give heat to Heaths as long as the frost can be kept out by coverings. A few degrees of frost will never injure Cape Heaths, whereas fires are their ruin. Let the air *blow* upon them on all favourable occasions: so with the entire class of *New Holland* plants. Azalea indica required for the purpose of propagation by cuttings, may be transferred to a warm temperature to excite an early growth. Cuttings will be found to root much better *early* in the season than at a later period. Re-pot Cinerarias. Gladioli, Alstroemeria, Lilium, &c., in pots, should be repotted. Calceolarias—re-pot seedlings, strike cuttings.

Chrysanthemums now done blooming protect from severe frost. Fuchsias which have been at rest, and *increase* is wanted, force them into shoots to strike from.

IN THE STOVE.

The plants best adapted for forcing are Roses, Persian Lilacs, Azaleas, Acacia armata, Neriums, Gardenias, Rhodora, Heliotropes, Correas, Deutzias, Mezereums, Coronillas, Cytissus, Ribes, Mignonette, Cinerarias, Sweet Violets, Lily of the Valley, Cactus, Cyclamens, and the old Eranthemum pulchellum with its fine blue flowers, Justicia speciosa, carnea, and flavescens, Gesneriæ Zebrina, Poinsettia pulcherrima, and Aphelandria cristata, are fine winter blooming plants.

BRIEF REMARKS.

GLASS. (*Juvenis*).—It is true that plants are sometimes scorched where the clear glass is used, but for your new greenhouse have Hartley's rough plate glass, it affords every required advantage that is realised by any other kind, and, at the same time, gives a desirable shade to the plants, obviating the covering with canvass in summer, &c., yet it admits a due proportion of light in winter. Plants flourish admirably under it. It is cheap, too, and may be had one-eighth to a fourth of an inch thick, cut to size desired, 6 by 4, at 2½d. per foot.

ROSE-CUTTINGS. (*A Subscriber*).—The China and similar sections of Roses do not push their buds so early as the French Roses (Gallicas, &c.), and cuttings may be put in the open ground as late as February, and will freely strike root. Cuttings

on those kinds of Roses which push their buds early should be put in in September, or as soon afterwards as convenient.

HOT-WATER TANK. (*Amateur Pot Plant Grower.*)—You intend to strike cuttings of greenhouse and stove plants, and want to know what is the best material to plunge your pots of cuttings in. If you use tanners' bark or saw-dust, and the vapour gets through your floor into it, it will soon rot, and be worse than useless. Coal-ashes, finely sifted, having the dusty part taken from it, is the best material we have met with.

CANTUA PENDENS. (*A Gardener.*)—It does not like much heat, and, when in a stove, is liable to the attack of red spider. In a cool greenhouse, or well-ventilated cool-pit or frame, it flourishes admirably.

VACANT FLOWER-BEDS. (*A Clergyman's Daughter.*)—The vacant flower-beds may be made to appear cheerful, by obtaining cuttings from the Holly, either with or without fruit, Box, Lauristinus, Narrow-leaved Laurels, Weymouth Pine Firs, or other *fine* leaved species, Arbutus, &c. These being cut in lengths suitable to the extent of the bed, &c., and stuck in the soil, so as to be firmly fixed, and to compose a suitable covering, give them a neat appearance. Each bed of one kind, and the variety of foliage, colour, &c., where there are several beds, produce a pretty effect. Where there are large trees or shrubs, such cuttings can be obtained without damaging them. The shoots will keep their vigour till the end of April, if required, and may then be removed for other summer things. Beds thus filled with cuttings of Evergreens in autumn have a cheerful appearance for several months. If bulbs be planted in autumn in such beds, the Evergreens can be removed just before the bulbous class of flowers appear.

EARLY SHOWY SMALL FLOWER-BED. (*Sarah Jane.*)—You request to know what plants will make a show early in the spring, which are to be succeeded by scarlet Geraniums, &c. Early in February fill the bed as follows:—Have a margin six inches broad, of the beautiful single Anemonies, the scarlets, whites, purples, crimsons, and other colours produce a pretty effect: then fill up the bed with *strong tubers* of the white, yellow, and scarlet Turban Ranunculuses. Have a circle of the yellow next the Anemonies, then the white, and the rising centre of the scarlets. These may be procured cheap, and once had are easily kept for many successive years. We have seen beds thus planted have a charming appearance. Crocuses have been tried along with the above, but they went out of bloom too early for the others.

BANKSIAN ROSE PRUNING. (*Enquirer.*)—In previous volumes we have stated The flowers you had this year (1851) were produced on the shoots which pushed, in 1850. Therefore, thin away the young shoots which push next season, leave only enough to train in, similar to a Peach Tree, and they will supply the flowers of 1853. No winter pruning is necessary, unless too many shoots were left at the summer thinning.

CHARCOAL, SAND, AND LOAM.—These, sifted fine together, are found to form an admirable compost to strike *soft-wooded* plants in. They root very quickly, and scarcely does a single one fail.—*Verax.*

BEST CLIMBING ROSES.—The most elegant display we ever saw of these charming Roses was in a nobleman's pleasure-ground, where the Rose-garden was an acre in extent, and was surrounded by a broad walk, on each side of which were the best selected climbing Roses planted, and trained to neat festoons. The various kinds were then in full bloom, the colours well contrasted, and the drooping elegant branches in such graceful beauty, that no language can describe.

CARNATIONS AND PICOTÉES.—I want a pair each of a few of the best varieties, give me the names of two in each class.—*A Country Curate.*

Carnations.—Scarlet Bizarre: Admiral Curzon and Martin's Splendid. Crimson Bizarre: Puxley's Jenny Lind and Lord Milton. Pink Bizarre: Falconbridge and Sarah Payne. Scarlet Flake: Cradley Pet and Justice Shallow. Rose Flake: Lorenzo and Madame Sontag. Purple Flake: Beauty of Woodhouse and Squire Trow.

Picotées.—Light-edged Red: Dodwell's Mary, and Gem. Heavy-edged Red: Mrs. Norman and Prince of Wales. Light-edged Rose: Mrs. Barnard and Countess Howe. Heavy-edged Rose: Marris's Victoria Regina, and Grace Darling. Light Purple: Ophelia and Matthew's Seedling. Heavy Purple: Hollyoake's Duke of Rutland, and Alfred. Yellow: Topaz and Euphemia.

MEALY BUG IN PLANT-HOUSES.—I am aware that many recipes are in practice to cure this almost inexhaustible pest; although, perhaps, nothing new, but not generally known, I give the result of an experiment tried with spirits of wine. Those plant-growers that are troubled with this insect would do well first to wash their plants with a mixture of soft soap and warm water, made to a lather. After washing off all you can, procure a small paint-brush of a fine quality, dip it carefully in the spirits, and brush well all the joints and crevices in the stems and leaves. In a day or two look over again, and the few eggs that may have escaped will then have become hatched, and another application or two will completely eradicate them. The spirits ought to be used with great caution, according to the constitution and texture of the plant and leaf. If delicate, dilute the spirit with a little water; and if strong rough barked stems, add a little spirits of turpentine, say half a-dozen drops to a table-spoonful of wine, for when combined they are very powerful and searching. All plants with hairy leaves, such as some *Clerodendrons*, &c., require the spirits of wine diluted; and others, such as the *Coffea*, *Laurel*, &c., do not. It will also be found, if the rafters, sashes, and pots of the plants are infested, a moderate quantity of turpentine mixed in hot water, with soft soap, will be very good for washing with; for the turpentine kills all immediately. I find it will not do to wash the leaves of plants with turpentine, as it burns all it comes in contact with. Spirits of wine, if laid on with caution, will also effectually kill the thrip and red spider. In conclusion, I would recommend this practice for fair trial, as I am confident that it will be found good.—*J. F. Roberts, Chelsea Botanic Gardens.*

VICTORIA REGIA in the house in the Royal Botanic Gardens is now rapidly declining, as is usual at this period of the year; the largest leaf which it made during the season was five feet eleven inches and three quarters, the largest is now five feet three inches; the largest flower was fourteen inches, and one which expanded on this day week measured only eight inches. The number of flowers produced during the season has been, since February 5th, when the first flower appeared, seventy-one, and the number of leaves eighty-one.

PROPAGATING ROSES BY CUTTINGS.—It is generally believed by amateurs and others that Moss, Provins, French, Damask, and Bourbon Roses, are difficult to increase by cuttings, but by the following method these sorts may be raised in abundance. Let a bed of well fermented stable litter and leaves be made by the side of a north wall, and place a one or two-light frame on it, so as to face the north. In this put about eight inches of leaf mould, that has been previously well soaked with water, then spread over all about three inches of sharp pit sand, and make the whole firm and level. The back part of a span-roofed pit, running east and west, with a wall in the centre, is also suitable for the purpose. It should be filled to within a few inches of the glass with the same kind of material. In selecting the cuttings, tolerably weak wood of the present year's growth should be taken, if it is sufficiently ripened at the base, or has made one full-formed leaf. Strip the cuttings with the finger and thumb, and smooth the base, reserving the detached portion of the parent bark, cut them close above the first leaf, and insert them in the sand, but not so thick that their leaves will overlap one another. When this is finished, the bed should be watered, to settle the soil about them, and they should have plenty of air for the first four days, but it ought to be lessened by degrees, so as to gradually inure them to a confined atmosphere. As the preservation of their leaves in a healthy state is essential to success, the bed may be formed and the cuttings put in on the same day, without waiting until the material becomes heated, as a thin covering of cellular tissue should be formed over the wounded end of the cutting before that takes place. In the third week, the greater part will be rooted, and in the fourth they should be potted off into sixty-sized pots, in a soil composed of leaf mould and loam. They should be afterwards removed into a damp frame or pit, without any water being given to their roots; but they may be slightly sprinkled over their leaves, and when they become well rooted in the new soil, they may be hardened off, and either shifted into larger-sized pots, or planted in a sheltered border, where they will make fine plants for next year. By again levelling the surface of the bed, and making the cuttings to two eyes, always preserving one leaf, Tea-scented, China, Noisette, and Boursault Roses, &c., will root freely in it, without any further preparation; but if a considerable quantity of the first-named sorts are required, either the old bed should be taken down, and a little fresh fermented dung

added, or a new one should be made, using the same sort of materials as are recommended above. The young wood should be taken before the blooms are expanded, and the cuttings prepared similar to what I have already described. The young shoots of what is called the second growth may also be used for cuttings. They should be taken when two full-formed leaves are made, smoothed at the base, and cut down to the first leaf, and then planted in a bed of the same construction as above. When they are rooted, they may be hardened off, and allowed to remain in the bed until spring. Plenty of air should be admitted in favourable weather. In this way they will occupy less room than when placed in pots, and they will stand the winter better. Cuttings of Roses, like those of many other hard-wooded plants, are more certain of rooting when they are made short, especially if a healthy leaf is attached to them, and kept there till they are rooted. This, however, can never be accomplished, if the soil in which they are placed is subjected to the alternate action of wet and drought; but by placing wet leaf mould between the dung and sand, an uninterrupted supply of moisture is obtained, and no water is required from the time the cuttings are put in till they are rooted in the pots. So suitable is this treatment, that when the bud at the axil of the leaf has been damaged, or is otherwise abortive, those at the root are excited, and suckers are produced. All kinds of Roses will root freely under this treatment.—*Midland Florist*.

BLOCKS FOR ORCHIDS.—After some years' experiments, I find that the best of all possible blocks on which to grow Orchids, are formed from the root of Elder. They must be allowed to dry, so that the bark strips off, and they should be sawn into suitable sizes. Their gnarled and rugged surfaces appear to be peculiarly agreeable to the roots of Orchids. I have long used Elder for this purpose, finding it by far the most durable of soft woods, and at the same time spongy, so as to absorb due moisture; but it is difficult to obtain it of suitable size and form. The roots which I have only tried during the last year or so, seem perfect, and such plants as *Cattleya Mossiæ*, *Dendrobium aggregatum*, and *Jenkinsii*, soon cover the blocks with their roots, which are thus preserved through winter without the slightest injury. If the bark be retained, minute insects (and I believe young woodlice) harbour and are troublesome; the naked wood is free from these objections.—*J. R.*

TRANSPLANTING EVERGREENS.—In some previous Numbers remarks on the best time to perform this business with the best success has been inserted. From the middle of September to the middle of November, it was stated, was the best period. Last year I had a large shrubbery planted, which was done at the above-named period, and although I had three acres of it, there has not been one evergreen failed. I had a pond close by the shrubbery, and had every plant watered at the time of planting, but have not repeated it, and all have grown admirably. I am fully persuaded the above-named period is the best to plant evergreens in general, whether shrubs or trees.—*A. G. Phillips, Liverpool*.

PROPAGATING CHRYSANTHEMUMS.—During the present month (October) I visited a floral establishment in the vicinity of London, and noticed a vast collection of these fine autumnal flowering plants, just removed into two large double-roofed greenhouses, which had side-sashes to open the entire length (on both sides). The plants were from half a-yard to two feet high, each having from four to six upright shoots well furnished with flower-buds. The plants were clothed with foliage down to the rims of their pots, and in the best health. Struck with the beauty of their growth, I was told by the manager, that old plants had been turned into the open ground in spring, where the branches could be spread at length, regularly around. In June, or early in July, 48-sized pots were plunged to the rim around the plants, near to the ends of the shoots, and one shoot was layered into each separate pot. As soon as it was perceived they had struck root the top of the shoot was cut off, leaving the stem from four to six inches high, this stopping caused the production of side shoots, which were duly secured to sticks, so as to have them grow erect. When the plants had got well furnished with flower-buds, they were cut from the parent plants, and then introduced into the house to bloom. Such uniform, handsome-grown specimens, and so admirably supplied with flower-buds, I never saw before.—*A London Amateur Florist*.

STACKING ICE.—Ice may be stacked—plain English ice, or snow well beaten down into a mass, after the Roman fashion, which answers for all economic purposes every bit as well. This is the mode of stacking ice or snow, which has been found

to succeed most thoroughly at Chatsworth:—In the first place, let the owner of the dairy-farm select, not the coolest and shadiest spot, as he inevitably would do without better instruction, but the openest and sunniest, because driest, bit of ground he can find—the sunnier the better. At Chatsworth the first trials were made in shady places, and proved far less satisfactory, because a dry place is required, and the dryness which the sun occasions more than compensates for the temperature of its beams. The platform having been judiciously selected, dig all round it a sufficient trench, which is to contain the water that will, more or less, inevitably drain from the completed stack; let the bank of the trench be lower on the outer side, and, if necessary, a siphon tube may be put in to drain off any excess. The object of the trench is, firstly, to prevent any of the drainage water from spreading over the platform; therefore to keep the platform dry: and, secondly, to preserve this drainage water, which is very cold, and can be used for making butter. Then lay over the whole platform a bed of straw, six or nine inches thick. Straw is a sufficient and convenient non-conductor, and ice wrapped in straw is tolerably well protected from external influence. Upon the straw bed make your stack, building up with sides perfectly upright. The sides are to be thus perpendicular, in order that whatever melts may at once flow into the trench, and not soak into and spoil the ice, which remains otherwise unmelted. If the stack happens to be long, partitions of straw should be inserted at convenient distances, for the protection of one part while another portion is in use. The stack being erected in this manner, coat round the whole outside of it, and thatch it with a straw defence of eighteen inches thick. If you build the stack of snow, build it in the same manner, but take care to batten it down. A stack of ice or snow, so made and so defended, will remain good through the hottest summer, and will obviate the necessity for any ice-house. Remember that all this will be done in mid-winter, when your labourers have comparatively nothing to do; when your horses are eating their heads off, and your cart-tires are rusting from idleness.—*Dickins's Household Words.*

REVOLUTION IN CLIMATE.—It has been an opinion universally adopted of late years, that the generality of our summers are more wet, and consequently colder, and our winters less frosty, and more mild, than they formerly were. This change has taken place since about 1770, and may be attributed to the increased evaporating surface of country, caused by the enclosing of the open fields and wastes; the multifarious intersections of them by fences, especially with hawthorn; and to the increased luxuriance of our green crops, by a general system of improvement in agriculture. To these we may add the increase of pasturage, productive of a serious disproportion between that and tillage; the numerous plantations, especially of foreign trees, whose exhaling power is prodigiously great, and the immense bodies of nearly stagnated water in the numerous canals that have been cut within the above period. The noise and vapour that accompany railway engines have, also, added nothing to the goodness of our weather.—*Cyclop. Magazine.*

GLASS WALLS.—The recent appropriation of glass sides and coping to form hollow walls, provided with wire trellises, under which fruit-trees and flowering-plants may be grown and forced successfully, is, I think, capable of improvement. The inventor, Mr. Ewing, has his models with upright sides, sliding on rollers or opening like doors, this certainly affords some advantage, but it would be much better to have the sides sloping, so as to catch, in the early part of the year, the more direct rays of the sun; and, if desired, a hot-water pipe might be fixed along the front, both north and south. The sliding of the fronts could be as readily constructed in either case. I think many of the fine kinds of large growing stove and greenhouse and half hardy shrubs, &c., might be well grown in such cases; and melons, cucumbers, vines, and fruit-trees would be cultivated most successfully therein, and have a beautiful appearance, and the produce of vegetable fruits would be much greater on trellises herein than in the usual hot-bed frames.—*An Amateur Gardener.*

HARDINESS OF THE JAPAN LILIES.—During the end of last summer we visited Mr. Groom's floral grounds at Clapham Rise, and then saw a complete forest of these charming Lilies, viz., *L. lancifolium album*, *roseum*, *punctatum*, and other varieties, in vigorous bloom in the open beds of his garden. They are treated in all respects as his other hardy Lilies are. Their hardiness being thus established, surely every person with a garden for flowers will find room for some of these most beautiful Lilies, and which can be had at so reasonable a cost.

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TO THE
MUSEUM

Fancy Pansies.
1. Novelty, 2. Inimitable.



1. NOVELTY. 2. INIMITABLE.

" The pretty PANSY then I'll tye,
Like gems some chain encasing ;
The next to them, their near ally,
The purple violet placing."

VIOLA TRICOLOR, is commonly called the Pansy, or Hearts-ease. The Greek name for VIOLET is ION, and some authors inform us that it was given because Io fed on its blossoms. Others tell us that it was so named after some nymphs of IONIA, who first presented these flowers in their special religious ceremonies.

Hundreds of years prior to the commencement of the Christian æra, the ancients held these flowers in high esteem, so much so, that one of the prizes contested for at the floral games was "a golden Violet;" and its estimation has been continued from that period to the present day, and now it ranks high among the garden's richest perfumes. One of our modern poets sings,—

" Where fragrant field flowers, gaily spread,
Drink deep the morning dew ;
Close by a murmuring riv'let's side
An humble vi'let grew.

" To her the cultur'd spot unknown,
She bloom'd in her retreat ;
And there in native fragrance bless'd,
Dispers'd a world of sweet.

- “ At length a curious florist saw
 The sweetly blooming flower ;
 Call'd her the field's, and garden's pride,
 And plac'd her in his bow'r.
- “ And since, in humble station near
 That fair *Viola* grew,
 Which now the name of *Heartsease* bear,
 Whose *power* can *care* subdue.”

Another poet celebrates the delightful perfume of their flowers as follows :—

- “ The Pansy and the Violet here,
 As seeming to descend
 Both from one root, a very pair,
 For sweetness do contend.
- “ And pointing to a Pink to tell
 Which bears it, it is loth
 To judge it ; but replies, for smell
 That I *excel* you both.”

The French call the *Viola tricolor Pensée*, which means *a thought*, and from this is derived our name *Pansy*.

The origin of its name *HEARTSEASE* is thus described by an ancient poet,—

- “ Ah, cruel love, must I endure
 Thy many scorns, and find no cure ?
 Say, are thy med'cines made to be
 Helps to all others but to me ?
- “ I'll leave thee, and to Pansies come ;
 Comforts you'll afford me some :
 You can *ease my heart*, and do
 What love could ne'er be brought unto.”

This charming flowering plant is a native of Siberia, Japan, and many parts of Europe.

We once saw a field in Yorkshire many acres in extent, closely covered with it, and when in full bloom the appearance was very beautiful. There were numerous varieties in colours, but of the original narrow-petalled form. The fragrance which the mass diffused was delightful, and perfumed the air to some distance around, especially where the breeze prevailed. Since the plant has been introduced and cultivated in the flower-garden, vast has been the improvement in size, form, and variegation. The beautiful specimens shown at our floral exhibitions are ample proofs, and each successive season our florists are producing additional improvements towards perfection in form, &c. ; such as suitable size, thick-stout petals, smooth edged, face even, *outline* a circle, at an equal distance on all sides from the eye, and decided colours, each colour being well defined. To the section which have graced our floral exhibitions hitherto, another has now commenced,

and no doubt we shall have in addition to singular markings and stripes, an improvement in form each future season.

The two we now figure belong to this section, and which are distinguished as FANCY PANSIES, similar to what has been done with the DAHLIAS.

The figures which our artist has given are a *trifle larger* than what we saw in bloom during the last season, and the outline appears somewhat better with the lower petals; this may arise from the circumstance of the two flowers becoming more flat when laid down on the paper a day or two for our artist's purposes. They are however beautiful varieties, and deserving a place in every flower-garden. There are, in addition, a number of others which are of very different grounds, stripes and markings, the best being offered for sale, and well merit cultivation, either grown as single specimens or in masses.

Previous volumes contain valuable instructions by our most celebrated growers of Pansies, and our general index, given last month, points out the respective pages.

NOVELTY was raised by Mr. Salter, of Versailles Nursery. INIMITABLE was raised in France.

NOTES ON NEW OR RARE PLANTS.

AMARYLLIS BLANDA.—A very beautiful flowering plant, which has recently bloomed in the collection belonging to Mrs. Bellenden Ker, of Cheshunt. It is a native of the Cape of Good Hope, and succeeds well in an airy part of the greenhouse during winter, drought and dry heat in summer, and will then flower magnificently in September. Whilst kept dry it must not be in a cold situation, or it will not bloom. It is very like the well-known Belladonna Lily. The flowers are of a delicate French white, changing to pink. Each scape has an umbel of twelve or thirteen large flowers. Each of which is five or six inches across, and are most deliciously fragrant. It is a magnificent species, and well merits a place in every greenhouse. (Figured in *Paxton's Flower Garden*, 68.)

CENTRANTHUS MACROSIPHON (Natural Order, Valerianworts).—It is a charming hardy annual from the South of Spain and it is a dwarfish plant, bearing large branching panicles (forming a corymbose head), of rich ruby-rose coloured, Valerian-like, flowers. They are produced numerously and have a very showy appearance. It blooms during the latter part of summer and autumn, which renders it additionally valuable. It is in the Horticultural Society's Garden at Chiswick.

CHRYSANTHEMUMS.—Pompone, or minima varieties. *Modele*, pure white, one inch and a half across. *Sacramento*, bright yellow, tinged with buff at the tips, one inch and a half across. *Perfectum*, rosy-lilac, centre of a few quilled florets, one inch and three-quarters across. *Asmodie*, copper-coloured, with a yellow centre, and as they age become tinged with red; one inch and three-quarters across. *La Pygmei*, a deep yellow, an inch across, borne in clustered heads, and is very suitable for bouquets. (Figured in *Mag. Bot.*)

DESFONTAINEA SPINOSA. N. O. Gentianacæ.—Mr. Lobb discovered this very handsome evergreen Shrub on the hills of Patagonia, and sent it to Messrs. Veitch. It has the appearance of a common holly, and is likely to prove quite hardy in our own country. It grows about five feet high. The flowers are tube-shaped, the tube being two inches long, and the terminal border is yellow. Mr. Lobb states that the Shrub blooms in profusion. It is a charming addition to this class of shrubs.

EPIDENDRUM REPLICATUM.—The racemes of flowers are about half a yard long, bearing numerous flowers. Sepals and petals a dull yellow, stained with brown, and a bright yellow edging. The lip is white, streaked with pink. Mr. Rucker obtained it from New Grenada.

ERICA THOMSONII.—A handsome hybrid raised by Mr. Turnbull, gardener at Bothwell Castle, in Scotland, it is a seedling from *E. aristata*, impregnated by *E. cerinthoides*. The plant bears a great resemblance in growth to *E. aristata*, but more vigorous. The tube of each blossom is an inch long, and wide, similar in form to those of *E. cerinthoides*, and produced in heads of ten or twelve together like that species; of a rich crimson, with darker coloured ribs. It is a free bloomer, and a valuable acquisition.

ERICA MOOREANA, also raised by Mr. Turnbull, from *E. retortamajor*, crossed by *E. Linnæoides*. Its habit is much like a dwarfer plant of the last named, but more branching, and a free bloomer. Each tube is near an inch long, of a bright rosy-purple, with a white tip. They are borne in heads of four or five together, and in profusion during autumn and winter. It is a valuable acquisition. (Figured in *Mag. Bot.*

EUGENIA UGNI. N. O. Myrtacæ. — A charming *hardy shrub* from South Chili, having the habit and appearance of our European broad-leaved Myrtle, and grows from three to four feet high, much branched, and blooming freely. The flowers are globe-shaped, each half an inch in diameter, white, tinged with rose. The leaves are produced in pairs, and a blossom, with a footstalk an inch long from the axil of each leaf, and the young shoots being thus beautifully ornamented renders it a *most charming shrub*. Messrs. Veitch's introduced it, in whose nursery it flourishes out of doors. (Figured in *Bot. Mag.*, 4626.)

FAGUS OBLIQUA. N. O. Mastworts (Beech-tree like). It inhabits the mountains of Southern Chili. It is a fine *evergreen* tree, growing forty to fifty feet high in its native country. The leaves are more like those of the Hornbeam in form than the Beech, of a beautiful pale green. Messrs. Veitch imported it, and it grows very freely in the open air in their nursery. It is a fine *graceful evergreen tree*, and a valuable acquisition for the pleasure ground, or margin of a plantation.

GAULTHERIA NUMMULARIÆ. HEATHWORTS.—A very pretty trailing evergreen plant, raised from seed by Mr. Ingram, gardener to Her Majesty at Frogmore. It is a native of the Himalaya Mountains, and requires to be kept in a greenhouse. The stems are slender, leaves

small, nearly circular, and the stems as well as the under side of the leaves are covered with stiff brown hairs. The flowers are small, white, which are succeeded by reddish-purple berries. Messrs. Veitch have received plants of it from their collector Mr. Lobb. (*Paxton's Flower Garden*.)

GRAMMATOPHYLLUM SPECIOSUM. N. O. Orchideæ.—It is a stove Epiphyte, which inhabits Java. "The vigour of its growth and extraordinary size of its flowers render it the Queen of Orchids." The late Mr. Griffith found it with a *scape six feet high*, and an *inch* through its stem at the base, bearing a profusion of blossoms, for half its length. Each flower is nearly four inches across and somewhat leathery; the outside is a pale lemon colour; inside a bright yellow, marked very regularly, with numerous roundish-brown spots. It is a magnificent plant, and has bloomed in the collection of Messrs. Loddiges's. (Figured in *Paxton's Flower Garden*, 69.)

GRINDELIA GRANDIFLORA. N. O. Compositæ-asteroideæ. — A native of South America. Seeds were received at the Royal Gardens of Kew, and during last summer and autumn up to November it bloomed in the open flower-bed. It appears to be either annual or a biennial. The plant we saw was four feet high, having a stout stem, numerously branching all the way up, and at the end of each a flower is borne. The entire branches thus adorned composes a corymbose head two to three feet across. Each blossom is of a rich bright orange colour, with a sulphur centre, and three inches across. It is one of the most ornamental flowering plants for the flower garden, and ought to be in every garden. (Figured in *Bot. Mag.*, 4628.)

IMPATIENS CORNIGERA. N. O. Balsaminæ.—Seeds of it were sent from Ceylon to the Royal Gardens of Kew, where the plant bloomed all last summer and autumn in the stove. It grows three feet high, branching much. Each blossom is single, about an inch across, yellowish, deeply tinged with pink. (Figured in *Bot. Mag.*, 4623.)

IMPATIENS PLATYPETALA.—A similar habited plant to the above, with larger flowers, of a violet-purple colour. It is named *I. pulcherrima*, by Sir William Hooker. It is the finest of this class of Balsams.

LOBELIA COMPACTA.—One of the upright growing, a profuse bloomer, and the flowers of a pretty light blue. Ought to be grown by all.

LOMATIA FERRUGINEA. N. O. Proteads. — A half-hardy shrub from South Chili, obtained by Messrs. Veitch, in whose nursery it grows in the open air. The leaves are doubly pinnate, each, when mature, being from six to twelve inches long. When young, of a beautiful rust colour, afterwards of a deep green. The shrub grows in its native country three yards high. The flowers are produced in short erect racemes, are green outside, and crimson inside.

MACHERANTHERA TANACETIFOLIA. N. O. Compositæ-asteroideæ. —A native of New Mexico. It is a half shrubby plant, with tansy-like foliage. It is a tender biennial, flourishing in the open ground in

summer. The flowers are aster-shaped, about two inches across, of a purple colour, with a golden-yellow centre. They are pretty, and produced at the ends of the shoots. (Figured in *Bot. Mag.*, 4624.)

MIMULUS ELEGANCE.—Lemon-coloured ground, with crimson-velvet blotches, very fine.

ONCIDIUM SCHLIMII.—Thomas Brocklehurst, Esq., of the Fence, near Macclesfield, purchased this new species at a sale of Mr. Linden's Orchids. A tall rambling plant. The panicle of flowers is long, borne on short racemes along each side of the main stem. The flowers are an inch across, of a bright yellow, having irregular bars of brown. (*Paxton's Flower Garden.*)

PELARGONIUM, SHRUBLAND PET.—This very pretty bedding variety has been raised by Mr. Beaton. Its habit is in the way of Purple Unique, but is very dwarf, a free grower, leaves sweet-scented, and much jagged at the edges. A charming addition.

P. QUEEN OF PORTUGAL.—This is like the Purple Unique in most respects, but a more vigorous grower, and the trusses of flowers are larger, having nearly double the number of blossoms in a truss. Their fine heads of rich purple-velvet flowers are very showy.

PODOCARPUS NUBIGENA.—Mr. Lobb sent this beautiful *hardy* ever-green bush, or tree, to Messrs. Veitch. It is a native of Southern Chili. It belongs to the Taxads (Yews), having linear-shaped, stiff, deep-green leaves. It is a valuable acquisition.

POTENTILLA BICOLOR-GRANDIFLORA.—Flower very large, golden-yellow, with a broad scarlet border, very superb.

PENTSTEMON BACCHARIFOLIUS.—A native of Texas, seeds of which were sent by Dr. Wright to the Royal Gardens of Kew. Plants of which bloomed in the open beds during last summer and autumn, where we saw it in beautiful bloom. It is an *annual*, growing from half a yard to two feet high. The flowers are borne in large terminal panicles. Each blossom is tubular, funnel-shaped, an inch and a half long, of a bright-scarlet colour. It is a very pretty addition to our garden annuals, and merits a place in every one. (Figured in *Bot. Mag.*, 4627.)

RANUNCULUS CORTUSEFOLIUS (Synonym, *R. grandifolius*).—The handsomest of all the *Buttercups*. A native of the Canary Islands and Madeira, which is quite hardy. The stem rises two to four feet high, and the flowers are produced in terminal, cymose-panicles. Each blossom is about three inches across, of beautiful glossy-yellow colour. (Figured in *Bot. Mag.*, 4625.)

SALVIA CANDELABRUM.—A native of the South of Spain. It is a hardy perennial, with leaves much like our common Sage, and the floral stem rises a yard high, branching, producing numerous large blossoms, having a greenish-yellow upper lip, and a rich violet lower one. Each blossom is an inch and a half long and an inch across the expanded mouth. (*Paxton's Flower Garden.*)

ROSE PRUNING.

BY MR. H. STILWELL, OF PINE APPLE NURSERY, EDGEWARE ROAD, LONDON.

(Continued from page 14.)

IN the January Number I stated the disadvantages of late planting the Rose, and the disappointment resulting therefrom to the extensive cultivators. I shall now notice the *old custom* of Rose pruning at Christmas or even previous to that time.

First, on pruning (so called) the last year's wood, generally left from sixteen to eighteen inches long. To see it thus performed is not a new thing with myself, my almost daily calls at gardens in and around London, supply specimens. The result of such pruning is, that in two or three years the plants are unsightly objects, even past recovery, unless they be cut closely back to the origin of their first shoots, and by so doing, the consequence is the production of a quantity of luxuriant shoots without any flowers. With such improper pruned plants we ought to cut back freely only the worst parts first, and leave the others till the following season. By this method, we shall have some flowers each season, and the defective form may in time be repaired.

I now notice the best time for pruning the Rose, especially Standard and half Standards generally.

I have found, from six years' practice, that the plants never failed in producing a good supply of flowers, being pruned in February, and some of the later pushing in the early part of March. By this time the most severe weather is usually past, and the buds below where I cut to are unmoved and consequently uninjured, but when the plants are pruned at Christmas or earlier, the buds upon the shoots left begin at a proportionate early period to push, and when thus excited, and severe weather occur, the buds are generally injured or wholly destroyed.

Rose pruning is susceptible of three divisions:—*First*, long pruning; *second*, moderate; and *third*, close pruning.

Long pruning should be applied to all *strong growing* kinds. Such should have six of the strongest shoots retained at as regular distances apart as circumstances admit, and be cut back so as to leave four buds, or if the wood be very vigorous, five buds. At the same time cut clean away any dead parts, &c. These remarks more particularly apply to most of the Hybrid China; H. Bourbons; H. Provence; H. Perpetual; H. Damask; and to the Moss, Gallica, or French, &c.

The *second* or moderate pruning requires to have the knife exercised more freely, and only three buds be left on the last year's shoots, care being taken to have the shoots at about equal distances, so as to make the head round and compact.

The *third*, or close pruning, is applied to some of our latest new kinds, for as many of them make but little wood the closest pruning is essential with such.

Under this head may be classed some of the weaker of the Moss Roses, &c.

FUCHSIAS AND VERBENAS.

BY ORION.

(Continued from page 12.)

VERBENAS stand very high in the estimation of the flower-loving world, and deservedly so, for what rival have they for filling beds on lawns? What is there that will make a grander display, from early in the season to quite the close? So various are the shades of colour that a splendid parterre may be laid out consisting entirely and exclusively of the Verbena; almost any coat of arms may be copied, yellow is the only *decided colour* wanting; though new ones described as yellow, have been, I think, *dishonestly* sent out, only to prove dirty whites or pale Primroses. But no more need be brought forward to prove the superiority of this many-coloured flower over every other, for bedding and other out-door purposes, but is this position maintained, when brought into contrast with other pot plants for conservatory and sitting-room ornament? We fear it will not then be found to rank so high. It is a flower that is very rarely exhibited "done well" in pots, some few gardeners have succeeded; as, for instance, Robinson's Defiance, when first exhibited, was grown and flowered in a very beautiful manner, but the few cases we could give form the exception to the rule that Verbenas are never seen to advantage at Horticultural Exhibitions. They are sometimes seen in cut bunches, but that is a very absurd manner of displaying floral productions, perhaps forty or fifty trusses huddled promiscuously together into one tube, all individuality gone, swallowed up in one mass of scarlet, blue, or white as the case may be. The generally established rule is to exhibit one truss of each variety, which is very good in its way, but is this a fair exhibition? can the merits of "bedding plants" be judged by a single truss, or even three being staged or boxed? the answer is *No*, and this will account for the large number of *weeds* which have been of late years honoured by a name. A Verbena may justly take a prize as a *seedling*, and yet, afterwards, be thrown away as an absolute worthless *bedding* plant. A very eminent florist, a worthy successor of one who did much for Verbenas in years gone by, showing the writer last summer his collection of upwards of seventy *new* varieties obtained from every raiser, said, to console himself for buying so many, "that there would not be more than ten, or one-seventh part, which he should keep to sell out the forthcoming spring," this should be looked into. Very many of the seventy had prizes awarded, or were distinguished in some way, but as *bedding* flowers they failed to come up to the descriptions which had been so liberally accorded them. The fact is, Verbenas have been dragged in of late years to take rank as a "florist's flower." Heliotropes, Phloxes and other plants are new recruits, and the end of it will be, species will *soon become* rarities; florists enlisting all seedling flowers and hybridizing them to an unlimited extent. This may be done to advantage, provided the habit and uses of the plants be borne in mind, but as instanced in the Verbena, striving to get a *perfectly round flower* with compact truss (not by any means a hopeless case), the required free blooming habit

is abandoned, merely to force nature to assume *rotundity*, if we may thus express what Mr. Glenny has been so long labouring to lay down as the only perfection of beauty. It is a curious fact that the better habit the flower the less rotundity of petals is there, and *vice versâ*, the rounder the flower, the worse becomes the habit; to instance this, Smith's Vixen, perhaps the best formed flower yet seen, is of very bad habit, and difficult of propagation, in good sense, well deserving its appropriate name. To sum up, though Verbenas may have progressed as regards *form*, it is to be feared no advance has been made in *colour*, *habit*, &c.; the year 1848, when Mr. Bell, of Norwich, sent out a set which did him honour, has not yet been eclipsed; besides Vulcan, Edmundiana, Duke of Norfolk, Marquis of Douro, Supreme, White Giant, and Petoiana, "all sent out by Mr. Bell," the same season there first appeared, Lady of the Lake, St. Margaret, Captivation, Emperor of China, Anacreon, Defiance, and many others equally good, all of which proved themselves on the bed well worthy of general cultivation. A few good novelties as Eclipse, Princess Alice, Apollon, Wonderful, Sunset, Magnificent, and last, not least, Madame Buenzod, have since been sent out, but not sufficient in the aggregate as "bedders" to equal those of the year 1848. This will go far to prove, that in awarding prizes, *habit* and *freedom of bloom* is not sufficiently considered, and before flowers do have rewards, it should be satisfactorily proved that they are, in *every respect*, worthy of them, that is, when grown either for exhibition, bedding in masses, or ornamental display. Without something of this sort is actually done, amateurs, and even most nurserymen, will avoid buying new advertised flowers, though "received four prizes and six certificates from the National," be appended to each name. In conclusion, the two best *scarlets* for general purposes are Defiance and Sunset; *purple*, Heloise and Apollon; *white*, Wonderful and Giant; *lilac*, Lilac Rival and Queen; *cherry and pink*, St. Margaret and Anacreon; while Princess Alice and Madame Buenzod distance all others I have seen in the *fancy*, or *dark eyed*, class. The *best formed* flowers, "habit, &c., not considered," have been Model, Comte de Paris, both very old, Vixen, Marquis of Douro, Queen of Summer, Junius, and Exquisite. The French varieties possess more *novelty* but are generally *deficient in shape*. The best of them are Chauverii, John Salter, Gloire de Paris, Pauline, Morphee, Niobe, and Reine Hortense. A new one named Auricula is likely to be in great request, being distinct from anything yet in cultivation, a light blue, with very striking white centre.

REMARKS ON THE MANAGEMENT OF CAPE HEATHS.

BY MR. CHARLES SUTHERLAND, FOREMAN OF THE EXOTIC DEPARTMENT, AT
MESSRS. LEE'S NURSERY, HAMMERSMITH.

OBSERVING that a correspondent recently requested some brief remarks on the management of Cape Heaths, so as to have them in a "bushy" state, I forward a few particulars relative thereto, which I trust will be of some service to the individual, as well as other growers of this

most interesting tribe of lovely blooming plants. To elucidate the mode of management so as to have *bushy* plants, it will be necessary to commence with the plants at their earliest stage.

The beginner must procure small sized plants of those he is desirous to grow, being careful to obtain them in a *healthy condition*, so that there is a prospect of their continued progress; and they ought not to be more than *two years* old, and such as have had the leading shoot stopped not higher than one inch from the surface of the soil in which it is growing.

On obtaining such plants, examine the roots, by carefully turning them out of the pots, "keeping the ball entire," and if there be plenty of healthy roots, give them a shift into pots that will allow *one inch* (not more) of additional fresh soil beyond the present ball. This process of re-potting should be repeated according as the state of the roots indicate; when such are numerous, and of a *clean* healthy character, then promote their health and growth by an additional shift to the extent as above described. If the plants have been shifted early in spring and properly managed afterwards, they will require another shift about midsummer; this more particularly applies to the quick growing kinds, such as *E. hyemalis*, *Wilmoreana*, and some of the *ventricosas*. Particular care must be taken not to overshift such kinds as *E. tricolor* and its varieties, *retorta*, *Hartnellii*, &c.

During their progress in growth, attention must be given to train and form the plants as may be desired. To have them *bushy*, however, the hearts of the young shoots must be pinched out when such shoots have extended to a suitable length. This is all the pruning attention that is necessary, and the plant being looked over twice during the growing period, is readily done, and the satisfactory *form* of the plants, as well as the bloom being much more increased in quantity and quality, most amply repays for such attention.

The young plants must not be allowed to bloom till they are good sized specimens, consequently as flower-buds appear, they must be carefully clipped off at their first appearance. If permitted to bloom the plants would be weakened in proportion, but prevented, they are strengthened thereby, and so much earlier they attain to a desirable size and form, and when this is *secured*, then the blooming must be promoted.

With the requisite degree of management in forming the plants, it will be many years before one becomes so unsightly as to require to be *cut in* as it is termed. I would not adopt it, for as young plants are easily obtained from cuttings, or can be generally bought at a cheap rate, "and properly formed," a race to succeed any that may be too large for circumstances, is readily provided, and the others can be dispensed with.

When, however, it is desired to retain an overgrown specimen, and it be of the *soft-wooded* class, it may be successfully cut back to the size required, and a supply of young wood be obtained. If there be too many new shoots produced, they must be duly reduced, and the hearts of those retained be pinched out, as recommended with young plants. "Hard-wooded" kinds do not successfully bear cutting in to any extent, if a trial is made *short pruning* will be best. If proper

attention to stopping the young shoots, &c., is given, especially with the hard-wooded kinds, it will be seldom necessary to have to cut in even an old plant. The best time to cut back any large plants is immediately "*after* they have done blooming."

There has been a prevalent opinion, that this charming tribe of plants was most difficult to cultivate, this only arose from the improper treatment pursued by some cultivators. With very little, "but regular" attention to their management, no class of exotic plants is more easily cultivated.

My reasons for recommending such *small* plants to commence with, is, "the certainty of their succeeding," which is hazardous with old ones, when they are even obtained in a healthy state. I have known instances where valuable old plants, in a healthy state, have been properly removed to a distant part of the country, where the air, soil, and water have been somewhat different from what they had been *accustomed* to, immediately become sickly and soon die.

If they even survive, under such circumstances, they soon, from loss of foliage, become naked and unsightly. Young plants will succeed, and readily become acclimatized, and inured to the circumstances and situation in which they are placed.

From long and extensive experience with this tribe of plants, I recommend that they be grown in *cold-pit frames* during the summer, the floor having a good bed of cinder-ashes, and the plants not to be crowded, but where a circulation of air can readily go round each. Instead of giving the plants *large* quantities of water during hot, dry weather, give only a *moderate* supply, and, at the same time, "*well soak*" the bed of ashes on which they stand, this will keep the pots in a cool, moist state during the heat of the day. I find a pit frame is much more suitable for the summer situation of Heaths, than having the plants, as is generally done, arranged out upon the open ground, where the sun and dry scorching winds operating upon the pots, greatly damage the delicate fibrous roots, often to the destruction of the plant; but in the pit (not a deep one) the roots, &c., have protection and a suitable atmosphere; besides the advantage of being able to protect the plants from *heavy rains* so frequent in the summer months, by readily placing the "*glass lights*" over them.

LAURUSTINUS.

BY CLERICUS, SOMERSET.

SOME remarks on the beauty of this shrub were inserted in the last Number of this Magazine. It is a favourite of mine, and I have twenty fine *Standards*, the stems being four feet high, and the heads four feet in diameter. The shrubs are grown in tubs, and they are placed along the sides of a straight broad walk, leading from the dwelling-house to a conservatory and flower-garden. At all times the plants have a pretty appearance, but especially so from November to May during the time they are in bloom. The plants were formed by training up a single stem, divesting it of side shoots as soon as they

appeared, and when high enough the head was readily formed. They far exceed the Orange tree in its blooming state, the numerous heads of waxy white flowers expanded, and the red buds of those not open have a charming appearance. Since I adopted this mode of treatment, eight years ago, the same process has been pursued by some of the nursery-men, and plants are now offered for sale.

Two years ago I bought two dozen of Standard Rhododendrons, about the same height as the Laurustinus, and when the latter are going out of bloom, the former are commencing, and I place them between the Laurustinus. Arbutus in bloom and fruit, red and yellow-berried Hollies, are treated the same, and are beautiful through winter.

STRIKING CUTTINGS OF ERICAS.

BY AN EXTENSIVE PROPAGATOR.

THE shoots must be the young wood of the present year's growth, the earlier in the spring the better, but may be successful later. They must be *half-ripened* at least, a little beyond the better, but neither *soft* nor *hard*. The ends of leading, or side shoots, be cut off clean, to about an inch, or a little more. The leaves must be dressed off with a small sharp razor, close as possible to the stem, so that not the least part remain. Dress them off about half the way up, as high as they will be inserted in sand. Be careful not to injure the bark of the cutting. Take cuttings from *healthy* plants. Cut each cutting clean, horizontally, close below the origin of a leaf. Insert them in white sand, first moistened and pressed firm; let the *bottom* of each cutting *touch the sand*; if a vacuum is allowed the cutting will perish. Press the sand close around the cutting but do not bruise it. Plunge the pot to the rim in some suitable material, in a cutting frame where there is a bottom heat about *new milk warm*, not more. Either cover with bell, or hand-glasses, or have a small frame placed in a cutting-house as is done at the Clapton Nursery.

With other continuous and due attention, nineteen out of every twenty cuttings will grow. The same kind of treatment with Epacris, Pimelea, Boronia, and similar tribes of greenhouse plants, Azaleas, &c., will be equally successful, striking root with the greatest readiness. As the earlier part of the year is the best for such operations, any late pushing plants should *now* be placed in a higher temperature than usual, to promote the production of proper ripened shoots at an earlier period.

PLEASANT REMINISCENCES OF A FLORAL PARTY.

BY ONE OF THE FIVE.

IT was on a beautiful serene sunny afternoon, in the third week in June, that I had the pleasure of incidentally meeting at the house of a friend four ardent admirers of the charms of Flora. The men of our party were of different age, profession, position in life, but they each possessed one point in common. There was a ready response in each bosom when

one topic was touched on, indeed there appeared to be no other which could, with any power, enlist the sympathies of all present—need I say that subject was floriculture. The scene of attraction was not the hall, the market, the news-room, or the tavern; it was a quiet unpretending flower-garden, in the south-eastern compartment of which there were stretched out, before the admiring eye, some half-dozen *Ranunculus* beds in gorgeous bloom.

A bystander might have supposed our party to have been quite aristocratic, for Queens, Princes, Dukes, Governors, and Presidents, were as familiar in their mouths as household words. Again, they might have been suspected of red-republicanism, for no high-sounding titles commanded their respect, the qualities of these personages were extolled or decried in manner most unceremonious. The truth is, the object of the afternoon was to select out of a thousand blooms the twenty-four best adapted for an exhibition; and hence Village Maids and Bonny Bessies were classified on equal footing with Princesses, Lords, and Dukes.

Our friend B., in whose garden we were, had that morning received from a distant grower a postal treasure, in the shape of a box of cut blooms, and this aided to enrich the proposed stand of flowers. Mr. F., in the pride of his heart, conceived he could outmatch the finest of the blooms in his four pets, Chimpanzee, Flaminus, Jane, and Jenny Lind; and as his garden lay within a mile, he started full of hopeful excitement to procure them.

It was agreed that thirty-six of the best varieties should be cut, numbered progressively, and staged; that each of the visitors should have a vote of approval, and be supplied with a voting paper on which the numbers were recorded, and that each person should write off the twenty-four of his selection. The rule in gathering the blooms was, that if any two dissented from the choice the bloom should be rejected. The first sort, which was unhesitatingly selected, was of the edged class, viz., *Sir John de Græme*; its shape, size, and colouring, brought forth the ejaculation, "there's no mistake about that!" Secondly, came a patch of twenty blooms of *Marquis of Hereford*, a splendid crimson, full of petals, of great substance, smooth in margin, high in crown; this was accepted and cut. The third sort had five or six blooms expanded, the yellow was rich and clear, the spots distinct, the substance good, and this one, *Indicator* by name, was approved and gathered. A white flower was next the subject of some friendly disputation, good whites being really scarce. This issue was, that *Wylie's Pearl* was admitted to the ranks of competition. A fifth flower was *Salome*, the sixth *John Waterston*, the seventh the old fashioned, but still unequalled dark-self, *Negro*, or *Naxara*, and so on, up to the complimentary number.

The flowers were soon arranged, and the work of censorship commenced. No arguments were used to influence the judgment. The choice was to be unbiassed, and when the votes were declared, the merits of the remaining blooms were to be debated over muffins and tea.

The following list will show the winning sorts, the class to which they belong, and the amount of patronage each one received:—

Name.	Ground Colour.	Marking.	Number of Votes.
Chimpanzee	White	Edged	5
Indicator	Yellow	Spotted	5
Sir John de Græne	White	Edged	5
Pleaser	Yellow	Edged	5
John Waterston	White	Edged	5
Flaminius	Yellow	Spotted	5
Marquis of Hereford	Crimson	Self	5
Salome	Cream	Edged	5
Alexis	Yellow	Spotted	5
Sir H. Pottinger	White	Edged	5
Enchanter	Yellow	Edged	5
Naxara	Dark	Self	4
Miriam	White	Edged	4
Festus	Yellow	Edged	4
Jenny Lind	White	Edged	4
Princess Royal	Cream	Spotted	4
Magellan	Yellow	Spotted	4
Larne	White	Edged	4
Queen Victoria	White	Edged	3
Interestor	White	Edged	3
Lady Sale	White	Spotted	3
Prefect	Yellow	Mottled	3
Splendour	White	Spotted	3
Bijou	Yellow	Edged	2
Pearl	White	Self	2
Herald	White	Edged	2
Coronation	Buff	Spotted	2
Mrs. Neilson	White	Edged	2
Verona	Cream	Spotted	2
Lady Fitzherbert	White	Edged	2
Eliza	Straw	Self	1
Gulliver	Sulphur	Edged	1
Jane	White	Edged	1
Alba maculata	White	Spotted	1
Prince Albert	White	Spotted	1
Olympia	Sulphur	Spotted	1

* The first twenty-four were deemed elected as the best flowers of that day. The result was interesting to the party. The meeting was pleasant and instructive, and I have given a slight sketch of it with the hope it may be the type of many future gatherings.

REMARKS ON BROWALLIA JAMESONII.

BY MR. HENRY LAYTON, SPRING LODGE, LIVERPOOL.

WHEN this handsome, blooming, soft-wooded, evergreen, shrubby plant was first introduced by Messrs. Veitch, and bloomed in their establish-

ment, that circumstance in connexion with the account that had been given of it by its discoverer, Dr. Jameson, in Northern Peru, raised high expectations among this class of plant growers, and it was sold at 1*l.* 10*s.* per plant. Many were purchased, but little being known relative to the proper treatment of it, but few plants bloomed, and those very indifferently, from which circumstance considerable prejudice was raised against the plant.

In your last volume of this Magazine, at page 266, an account of a plant grown, and blooming profusely is inserted. Having a friend residing near the place, I got him to ascertain how the plant had been managed to succeed so admirably. From him I learnt that the great secret with the plant was, "that its flowers are *produced* on the wood made the *previous year*, and especial attention must be paid to have that wood "well ripened" in order to the production of flowers the following season. This is effected by having a tolerable sized plant in February or March, placing it in a house where there is a gentle warmth, and when the new shoots have pushed thin them so as to leave the plant open, re-pot it in the same pot but shake off a good part of the soil, and dress in the roots, again having the plant in a gentle temperature. When their young shoots are about five or six inches long pinch off the leads, this will throw strength into the parts left. Re-pot the plant about midsummer into one a size larger, and if any of the new shoots have pushed leads again, stop them, and in a week or two place the plant out doors in a warm, but airy situation to harden off its new wood. At the approach of cold weather take it into the greenhouse, or DRY pit-frame, and towards the end of December, place it in a forcing-house, same as is done with hardy shrubs that are forced for winter bloom, and the *Browallia* will bloom profusely, and being placed in the greenhouse will long be one of its handsomest ornaments. A succession of it may be had in later bloom.

MISCELLANEOUS SECTION.

CHRYSANTHEMUMS.—The following varieties have appeared most frequent (in gradation as we insert them) in the various collections shown at the Chrysanthemum exhibitions which have been reported last autumn. Our readers will, however, bear in mind, most of the recent new improved varieties have as hitherto been but in comparatively few hands:—

Defiance, Golden Clustered, Queen of England, Pilot, Annie Salter, the Duke, Beauty, Vesta, King, Phidias, Formosum, Goliath, the Warden, Dupont d'Eure, Lysius, Sydenham, Campestroni, Madame Chauviere, Christine, Madame Poggi, Cloth of Gold, Minerva, Princess Maria, Madame Camerson, Nonpareil, and Orlando. All deserving a place in every collection.

AMERICAN PLANTS.—American plants include certain genera, all belonging to the natural order Ericaceæ; the principal species from which the best varieties have more recently been raised having been originally introduced to Britain from the American continent. They are all more or less beautiful; but the *Rhododendron*, the *Azalea*, the

Kalmia, and one or two others, are especially remarkable for their dazzling colours and the profusion of their flowers. But while American plants are unrivalled as objects of magnificent display in the open ground, the shrubbery, or lawn, they are not less remarkable for the facility with which they may be cultivated. For though it is well known that, as compared with other hardy evergreen flowering shrubs, they present one or two features peculiar to themselves, it has been equally demonstrated, by long experience, that they may be successfully managed with only the exercise of ordinary care and intelligence, without which the most elaborate dissertation, or even specific directions, would be of little or no avail. The plants by which a tribe or order is composed are characterized by a particular constitution : this remark is especially applicable to those now under consideration. It has long been known that Cape Heaths, forming the type of the order to which American plants belong, have never been grown in France, Belgium, and many parts of Germany, to the same perfection as in England ; and the cause assigned has been chiefly the want of proper peaty soil, without which these beautiful greenhouse and hardy plants will not thrive, however favourable other circumstances may be. This fact, however, has been frequently urged as an argument against the possibility of growing *Rhododendrons*, and other genera known as American plants, except in a certain kind of peaty soil ; and it is unfortunate for the tenability of an opposite position that the objection has derived apparent weight by being associated with isolated cases of failure. Yet nothing can be more erroneous than the supposition that there is any difficulty in supplying them in almost every locality with soil sufficiently fertile for all practical purposes. That some districts are more favoured than others, as respects the composition of soil, cannot for a moment be doubted ; and it is perfectly true that a rich well pulverized peaty soil is the most preferable for these plants. But we have only to visit such places as Kenwood, the seat of Lord Mansfield, and others near London, to perceive that *Rhododendrons* will grow in any kind of good and fertile soil to considerable perfection ; and there are many instances in which they luxuriate in what is called a light, friable, fertile loam, of which the much prized peat forms a very insignificant part. But though American plants are not so strictly exclusive in their predilections as may have been supposed, it should not be forgotten that a rich peaty soil is that which most accords with their natural constitution. But it is scarcely necessary to state that this soil may be found more or less plentiful in every county of England. Peat, it must be remembered, is composed of certain vegetable substances, which have undergone a long and slow process of decay. These substances are chiefly the softer portions of forest trees ; as leaves, nuts, and tender branches or twigs. Hence it is that in the absence of good peat or bog an excellent substitute can always be readily formed by artificial means ; that is to say, by well decomposed "leaf mould" or rotten leaves, and a portion of white or yellow sand. The leaf mould, to be sufficiently decomposed for planting, should have lain in a heap exposed to the action of the atmosphere for at least eighteen months ; and even a longer period might be advantageously allowed :

the sand may, however, be used fresh at the time of planting, and mixed with the leaf mould as it is taken from the heap. Another mode for meeting the want of good bog is to prepare a compost in the following manner:—Collect several loads of what is called the top or surface-spit of any plantation, wood, or even grass field, and the more this surface is impregnated with decayed vegetable particles the better. It is not uncommonly found very good in woods and plantations, owing to the decay of leaves and other *debris* peculiar to such places; and the thickness of the “spit” will depend, of course, on circumstances, being more or less according to its composition. When a sufficient supply has been obtained it should be thrown together for several months, and then carefully and freely mixed with leaf mould, old and well rotted dung from a melon frame. In this operation the turfy parts should not be chopped fine, but preserved as rough and large as is compatible with the thorough mixture of the whole mass. Whether the plants are to be placed in beds or compartments of more irregular outline, the average depth may be stated at about twenty inches. To this depth the soil should be taken out, and an equivalent portion of the compost already described placed in its stead. At the time of planting *Rhododendrons*, *Azaleas*, *Kalmias*, or other American plants, should the weather be very dry, nothing is of greater importance than a copious supply of good water, which has been exposed for some time to the weather. Rain water, collected in a pond or tank, is at all times the best for the roots of plants; it is, therefore, desirable to provide some certain means of securing a plentiful supply. This injunction is the more urgent during the first season of planting; for after they are fairly established there is, comparatively speaking, but little to apprehend. In very dry seasons, however, every precaution should be observed to prevent the balls of earth round the roots from becoming dry; an evil to which they are liable in elevated positions. It may further be stated that after the composition and texture of the soil, the next important point in the treatment of American plants, is affording them a plentiful supply of water, and thoroughly draining the ground in which they are to be grown previous to planting.—*J. Waterer's Catalogue.*

REMARKS ON THE CALCEOLARIA.—I am a London exhibitor of this pretty flowering tribe of plants, and having been very successful, I send a few remarks on them for insertion in *February Magazine*.

Stock.—I strike cuttings in September, and pot off into 60-sized pots about the end of October, and keep them in winter in a dry, shallow plant pit, which has a small hot-water pipe along the front.

Compost.—Equal portions of turfy sandy peat, loam, leaf mould, and well rotted hot-bed dung, incorporated together for a few weeks before using is the most suitable for growing the plants vigorously, I never have the compost sifted, but well chopped with the spade previous to potting.

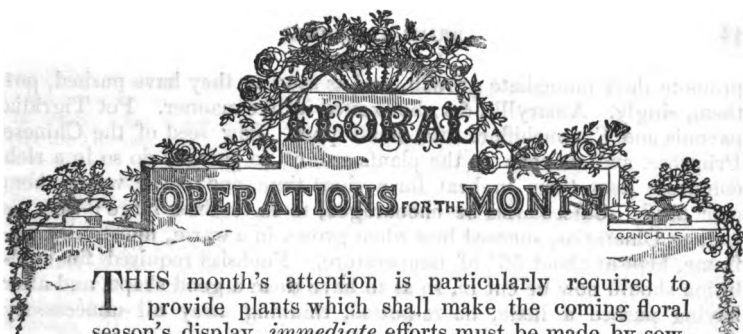
Potting.—A very free proportion of drainage is essential to their success, and I place one inch deep of broken potsherds, and one inch of moss upon them, and to very large pots I give two inches deep of each: upon this substrata the soil is placed. The *Calceolaria imbibes*

a considerable portion of water by the roots, when it is in a healthy condition; to supply it with a fresh element of it, is therefore necessary. If there be not a free drainage to allow superabundant water to pass, the soil becomes saturated and sour, which occasions sickness, and often the death of the plant.

The time I *re-pot* my young plants, potted off in October, is about the middle of February; the most vigorous I plant in pots, one foot in diameter and ten inches deep. Weakly plants I put in pots half the size for a few weeks, and then re-pot them into a larger size, as the circumstances of growth require; in pots of this size I bloom my stock generally, but when I see a plant in such a sized pot that would bear a larger I remove it into a size bigger.

The surface soil is frequently stirred to allow water to pass freely, and evaporation duly to rise to the under side of the foliage, &c. *Soft water* is used, hard would soon kill the plants. The soil is kept *moist* but not *wet*. The plants do not flourish if exposed to full sun, they may have early morning sun, but must be in the shade afterwards, say till four o'clock, by such attention mine always flourish.—*John Spencer, Southwick.*

SOIL BEST SUITED FOR CAPE HEATHS, &c.—The soil which the Cape Heaths, and many other fine rooted plants prefer, is called peat, bog mould, heath mould, moor earth, &c., and abounds in sufficient quantities in many places, particularly in uncultivated heaths. But of this soil there are both good and bad sorts, that is, sorts in which plants will grow to perfection, and others in which they languish and decay. Nor is it to be taken for granted that that peat which produces the finest and healthiest crops of our common heaths, such as *Erica tetralix*, and *cinerea*, is always a fitting soil to be used for exotic plants of similar habits; for many, by contenting themselves with this test, have found out their error, when too late to remedy it. That peat is best which contains about one-fourth or one-fifth of coarse white sand, and is taken from a dry heathy common, which is never overflowed with water, and off a sub-soil in which the recently-discovered chemical substance, *creasote*, which has deleterious effects upon all vegetables, does not abound. It might be well for the cultivator to have a chemical analysis made of his soil, by which the presence or absence of *creasote* would be determined, and which any respectable chemist would discover for him. When abundance of sand does not naturally abound in the peat, any coarse white sand, *free of iron matter*, may be added. It appears to be of little consequence whether or not good peat be prepared for any previous period in the compost yard prior to using; I rather think that the sooner it is used the better. Never have it sifted, but broke with the hand or trowel. As a substitute for peat, some have recommended very rotten dung, decayed leaves, &c., having a due proportion of gritty sand added; and others have suggested the addition of very rotten manure to be used with peat, with a view to increase the rapidity of the growth of the plants. The former may be used, in default of better, for hardy American plants, but the addition of the latter is by no means to be recommended.—*A Practitioner.*



THIS month's attention is particularly required to provide plants which shall make the coming floral season's display, *immediate* efforts must be made by sowing seeds, striking cuttings, dividing plants, &c.

IN THE FLOWER GARDEN.

Rose-trees must be planted directly, or success is hazardous. Prune the open-air kinds of the *hardy class* now, and the tenderer sorts next month. Perennial and biennial plants in the flower-bed may be divided. Plant out Hollyhocks and any of the biennial plants. Pink beds: see that the plants remain secure. Carnations and Picotees: if mildew attacks the leaves sprinkle with sulphur. Manures should be laid over the roots of Roses, removing a few inches of the earth, filling up the hollow with well-rotted cow or hot-bed dung, and sprinkle it over with soil, so that it may not dry.

About the middle of the month, if the weather be dry, plant Ranunculuses and Anemones five inches apart, an inch and a half deep from the crown to the surface; and if the soil be dry, after planting, press the surface with a flat board. Be careful that Tulips be firmly secured in their positions, so that they be not damaged by wind. A small protection against strong wind should be provided on the bed side most exposed. Heartsease should have a similar protection. Now is the time to make a plan of the flower-garden, parterre, &c., and to mark each bed with the kind of flowers required, and then to prepare a stock to furnish accordingly, whether from the sowing of seed or otherwise, as with Verbenas, &c. Protect the early buds of Tree Peony, &c.

IN THE FORCING STOVE OR FRAME.

Sow seeds of the tender annuals, as Balsam, Amaranthus, Cockscomb, &c., in pots, and the half-hardy kinds, as Asters, Stocks, &c., either in pots or upon a bed of soil, &c.

Cuttings of Fuchsias, Alonsoas, Ragwort, Calceolarias, Cupheas, Salvias, Heliotropes, Geraniums, Lotus, Bouvardias, Anagallis, Verbenas, Petunias, and such like plants, for the open beds in summer, should immediately be struck, or the plants will be too weak to answer the purpose. If cuttings were put off in autumn, they should now be potted off singly into small pots, any long ones amongst them should be stopped, to induce laterals and make bushy plants.

Dahlia roots should be immediately put to force for stock, and seed be sown in pots. Lobelias be potted singly to have them vigorous by turning-out time. Boxes and pots of Mignonette for succession should be sown. Achimenes, Gesnerias, Gloxinias, &c., be introduced, to

promote their immediate growth, and as soon as they have pushed, pot them, singly. *Amaryllis*, &c., be excited in like manner. Pot *Tigridia pavonia* and *T. conchiflora* into small pots. Sow seed of the Chinese Primrose, and as soon as the plants are fit to pot off do so in a rich compost; keep them in heat for a short time, and never water them over head. *Calceolarias* be encouraged, to have them large; they, as well as *Cinerarias*, succeed best when grown in a warm, moist, airy pit-frame, kept at about 56° of temperature. *Fuchsias* required for exhibition should now be cut in, so as to have them a good shape, and after having pushed a little, be re-potted, thinning away all unnecessary shoots.

IN THE GREENHOUSE, &c.

Pelargoniums, to be superb specimens, should be re-potted into their blooming pots (read the several Articles on their culture in previous volumes); they must have a free circulation of air around the plants; it gives vigour to the shoots and prepares them for a higher temperature afterwards without injury, and a stronger bloom is produced. The one year old plants headed down last autumn will have produced young shoots, now a few inches long; thin them. In order to have a succession of bloom, now stop the shoots; this will induce the production of lateral ones. which will come into bloom after the first race of plants have ceased, and continue to a late period of the season. A few more plants, stopped a month later, will supply to the end of the year. (See Vol. xvi., p. 199.) The surface soil in all pots should be stirred up; it tends to health. *Epacris*, *Correas*, *Coronillas*, *Acacias*, *Cinerarias*, and other plants, will now be coming into bloom; water seldom as possible, but when given let there be as much as will moisten *all* the soil. *Ericas* will still be inactive, give but little water. If any mildew appear, dust with sulphur. *Camellias*, too, should occupy an airy part, and the greatest care should be taken to keep the soil in an *equally moistened* state, using water of a temperature equal to that of the house. Give weak manure-water alternate with the other. *Alstroemerias*, *Lilium speciosum*, and others, should be re-potted.

IN THE STOVE.

Old plants of *Fuchsia corymbiflora* now gently pushed on will come finely into bloom by the first week in May, or, if the season be fine, earlier. Exotic seeds should now be sown (see Articles in former volumes). Specimen plants for exhibitions will require re-potting, pruning, &c. *Ixoras* should be elevated, so as to be near the glass, in order to set their bloom; they must have plenty of air at all times convenient.

BRIEF REMARKS.

THE TULIP SOLD UNDER DIFFERENT NAMES.—Mr. Slater, in the *Floricultural Review for January*, gives a list of Tulips that have been sent out with wrong names, and in his remarks upon them states, "The Tulip, from its great price, and from its being an especial favourite with all classes, has suffered more from *aliases* than the whole [of other florist's flowers] put together. The Sherwood seedlings raised in the neighbourhood of Derby, from *Rose Vesta*, led the way, by their

popularity, to many abuses. If they only travelled a few miles, they were certain to have another name. *Queen Boadicea*, feathered rose, only went to Nottingham (16 miles), when it was called the *Duchess of Newcastle*. *Lady Creve* travelled with the Duchess, and one name was not sufficient, it got two, *Lady Middleton* and *Mrs. Mundy*. *Lord Hill* got the alias of *Josephine*. *Sir Sydney Smith*, an old variety grown in the south under the following aliases, Franklin's Washington, Demetrius, Trebisonde, got to the same locality (Nottingham) and was soon sent out at 40s. per bulb under the name of *Magnum Bonum*. *Duc de Savoy*, also a very old variety, selling at the time at 1s. 6d. per bulb, kept the same aristocratic company, and was changed into *Spencer's Grand Duke*, and sold at 40s. per bulb. *Bartlett's Platoff* got into the same company, and was sold out 'as a seedling raised in that neighbourhood,' at upwards of 5l. per bulb under the name of *Royal Sovereign*. It also goes under the following aliases: *Page's George IV.*, *Gurnett's Waterloo*, *Duke of Lancaster*, *Victory*, *La Conquerant*, *Defiance*, *Gabel's Glory*, *Charles X.*, and *Strong's Germanicus*. *Leopoldina*, well known as a very old variety, and low priced, got to the same locality, and was sold for 40s. per bulb under the name of *Grandeur Touchant*. In the south, the dispersion of the celebrated Clark's breeders caused much confusion."—"Garrick has three aliases, *Edmund Kean*, *Shakspeare*, and *Leonidas*, and at one time there were seven guineas difference between the highest and lowest price, although it was well known to be only the same variety. *Leonatus Posthumus*, alias *Glencoe*, was selling under the first name at 15s., and under the latter at 63s. *Cerise Blanche*, alias *La Tendresse*, *Ponceau Tres Blanc*, and *Madame Catalina*, sold at a difference of 10s. 6d. each. *Rose Camuse*, alias *Rose Brillante*, 20s. difference. *Polypheumus* has the following names: *Goldham's Albion*, *Brown's Ulysses*, *Brown's Hamlet*, *Brown's Thomas Brown*, and *Nourri Effendi*." [These defects show the necessity of something being done to remedy the confusion which exists. Mr. Slater purposes to give an entire descriptive list of all aliases in Tulips, that have come under his notice. As some of our readers may benefit at once by what Mr. Slater has now pointed as errors, we extract it at once from his useful publication. Although Mr. Slater states some parties in certain localities have sent old varieties out under other names, and as new varieties, we do think it has been done by mistake, not with an attempt to deceive or defraud purchasers. However, the existing confusion in names should be rectified as far as is practicable, and we think no one more likely than Mr. Slater to accomplish it.—EDITOR.]

POLYANTHUSES.—Mr. Slater further states that the following irregularities exist with these flowers:—Clegg's *Lord John Russell*, sold also as *Hufton's Earl Grey*, Clegg's *Golden Hero* as *Prince of Orange*, *Hufton's Lord Ranciliffe*, *Hay's Lord Deuman*, and *Sir John Cam Hobhouse*. Clegg's *Lord Crewe*, as *George Canning*. *Sir Sydney Smith*, as *Dew's Britannia*, *Mellor's Lucetta*, and *Dormand's Lord Duncan*. *Hufton's Earl Lincoln*, which is a first-rate flower, has had *Lord Ranciliffe* substituted for it. Mr. Slater is entitled to ours, and the thanks of our readers, for his attempts to remedy these things.

POLYANTHUS.—On two occasions during the last six years, I purchased a select collection of these pretty blooming plants, and in two years after I obtained the collection I had lost the whole. I planted them in 48-sized pots, in a strong yellow loam, mixed with some well rotten hot-bed dung, I kept the plants in a single light frame, fully exposed to the sun from ten in the morning to setting, and every attention was given to watering, air, re-potting, &c. Yet with all such care I was unsuccessful. I am so fond of the lovely flowers, that I wish to try again, and have just purchased two dozen plants (ten varieties). I should be greatly obliged by some person who grows it successfully to give me some instructions, as to culture, &c.—*A Cornish Amateur Florist*. [In previous volumes (see Index in our last Number, and in Vol. viii.), some excellent articles upon its culture are given. We observe, however, that the original species in its native locality, only flourishes well where it grows in shade, in woods, under hedges, &c. The early spring sun it will bear, but hot summer sun is destructive to it, and the florist's Polyanthus must have "shade from ten in the morning to five in the afternoon." Generally a place may be found in every garden, where a free circulation of air may be allowed, in connection with proper shade. Dry hot winds are injurious to the plants, cool air, under a low hedge, &c., suits in summer, and protection from frost in winter. In a compost of fresh loam, well rotten leaf mould, peat soil, and old

rotten (dry) cow-dung, in equal parts, we have seen it flourish admirably and successively for many years.]

FAIRY RINGS.—Dr. Lantzius Beninga states, respecting these curious phenomena: "The question as to the cause of fairy rings has often been discussed. Without contradicting or questioning the explanations which have been given by other botanists, I will only remark that, according to my own observations, they depend upon the more or less perfect development of the mycelium of the fungi, by which they are produced. The mycelium, which is the vegetative organ of the fungus, grows amongst or upon fallen trees, decayed wood, or, according to the nature of the species, on other decomposing organic substances. If the necessary conditions exist on all sides: that is, if the requisite decaying matters are sufficiently widely diffused, and no mechanical obstructions, as stones, trees, &c., are interposed, the mycelium spreads equally on all sides from the original point of development. This, except in its greater delicacy and fugitiveness, is perfectly analogous to the thallus of most lichens. The more delicate it is the quicker it grows, and the more easily the older portions perish; and while the circumference is in the greatest vigour the central parts are dead, or more or less entirely evanescent, so that it then grows in the form of an always increasing circle. When the time for the formation of spores arrives many pilei spring from it in the form of a circle or ring, or, in other words, the fairy ring is perfect. Most lichens agree with this, not only in the growth of their thallus, but also in the position of their fruit or apothecia; and it is evident in those species whose growth and decay are the most sluggish, as in some *Parmelia*, or more especially in some *Peltigera*, that they still vegetate and fructify perfectly towards the margin of the thallus, while the centre is entirely decayed. If the thallus is of a very persistent nature, still the progress of vegetation and fructification from the centre to the circumference is distinctly visible. In old specimens the centre is usually free from apothecia (unless where a new superincumbent thallus has been formed, after the decay of the old); then succeeds a ring of large perfect apothecia, and then near the margin of the thallus a circle of young apothecia, which are younger in proportion as they are nearer to the margin."

DEATH OF PROFESSOR DUNBAR.—Horticulture has met with a severe loss in the death of *George Dunbar, Esq.*, Professor of Greek in the University of Edinburgh. This melancholy event took place on the 6th of December, at his residence, Rose Park, Trinity.

Professor Dunbar has been long known as an eminent horticulturist, and he has introduced many interesting and valuable plants into cultivation. His garden at Rose Park contained many specimens which did credit to his zeal and ability as a cultivator. He was long connected with the Caledonian Horticultural Society, and always took a warm interest in its proceedings. He attended the meetings with great regularity; his name was long on the list of office-bearers, and he was re-elected as one of the Vice-Presidents of the Society at the general meeting, which took place two days before his death. His name is recorded in the annals of Botany by the Indian genus *Dunbaria*, dedicated to him by Wight. This genus belongs to the natural order Fabaceæ; *D. latifolia*, a beautiful scandent plant, was exhibited by Dr. Cleghorn, to the Botanical Society of Edinburgh, shortly before his departure for India.

It is in the department of Greek literature, however, that Professor Dunbar's name is best known. In early life he laboured for some time as a gardener, but an accident, from the effects of which he was lame during the rest of his days, incapacitated him for so active an employment. His attention, accordingly, was thenceforth devoted to literature, and an assiduous cultivation of the classics soon developed those faculties of which, in subsequent years, [he showed himself possessed. Coming to Edinburgh about the beginning of the century, the attainments he had already acquired easily procured for him a situation as tutor in the family of the then Lord Provost Fettes. Having been shortly after selected as assistant to Professor Dalziel, he was appointed, on this professor's death, to the Greek Chair in 1805. The duties of this responsible position he has since continued to discharge with a zeal and ability well demonstrated by a reference to the many eminent scholars which our Alma Mater has sent forth. The published works of Professor Dunbar are all of them too well known to need any lengthened allusion.

Professor Dunbar died in the 76th year of his age, having been born in the

village of Coldingham, Berwickshire, in the year 1774. His remains were interred in Greyfriars churchyard, the funeral being attended by a large number of the professors and students of the University.

PROPAGATING CLEMATIS AZUREA, AND C. SIEBOLDII.—Observing that a correspondent recently solicits information on this subject, I beg to inform him, the most common method of propagating these plants is by layers. By securing each bud of the shoots to be layered at a trifling distance below the surface of the soil, they will soon push root, and by the severance of the shoot between the buds, a quantity of plants, equal to the number of buds, will be obtained. A very quick mode of increase, however, is that of grafting them into the stock of the common kind of clematis. A young shoot (not too tender) inserted into a strong stock, soon unites and grows rapidly. Inarching the kinds upon a common and vigorous sort is the most certain and quickest mode of increase, and where practicable should be resorted to. Cuttings of the old shoots are difficult to strike root, and young ones are very liable to damp off.—*James Clarke.*

RUSTIC BASKETS FOR FLOWER-BEDS.—Amongst the many modes and appliances called into use for the embellishment and diversification of the flower-garden, perhaps there are none that deserves a greater amount of patronage than the rustic basket. Its construction is simple and cheap, and it furnishes us with the means of bringing into happy combinations plants of various habits. Of course the size and shape of the basket, which in different situations may be various, must be kept in view. One I have lately used is of the simplest form, being a mere circle constructed with staves of birch or elm, with the bark on: it stands about eighteen inches above, and is sunk as much below the surface of the lawn; its diameter is ten feet, over which are two arches, formed with six iron rods, crossing at five feet above the top of the basket. The centre was planted with *Ageratum odoratum*; then two rows of scarlet geranium; the edge with the old trailing variety of ivy-leaved geranium; and *Tropæolum canariensis* was trained over the handles; altogether it had a pleasing effect. The ivy-leaved geranium harmonises well with the rough bark that forms the sides of the basket, to which it should be fastened with a few shreds, to prevent its being broken by the wind.—*P. Scolding, Woodbridge, Suffolk.*

MANDEVILLIA SUAVEOLENS.—In answer to an inquirer, I observe that this *hot-house creeper* "will grow in a greenhouse," but will not bloom *there* in perfection; it requires to be in a higher temperature "*thus*" to flower and it deserves a place in every stove. It flourishes in the following compost: equal quantities of the knobs of turfy loam and turfy peat, with a little silver sand, and good rotten dung, and the addition of a liberal drainage.—*C. Sutherland.*

TROPÆOLUM SPECIOSUM.—In our last volume we noticed that Messrs. Veitch had found this very beautiful flowering plant to grow vigorously and bloom profusely in an American border behind a north wall where the sun does not shine upon it. Their collector, Mr. Lobb informs us, "that in Southern Chili, its native country, he found it growing in *cool shady places*. It scrambles up sticks, bushes, &c., two yards or more high, bearing an enormous quantity of flowers. No doubt it is perfectly hardy in our own country, and if properly grown, its profusion of rich scarlet blossoms will be highly ornamental. The tops die down to the strong perennial root in winter, but that remains uninjured, and pushes more vigorous the following year. It merits a place whenever it can be accommodated with situation.

YELLOW VIOLET (MESSRS. VEITCH'S VIOLA LUTEA).—I should be obliged by any of the correspondents in the FLORICULTURAL CABINET, informing me the best mode of cultivating the Yellow Violet, whether it requires a stove or greenhouse, as I purchased one last spring and it does not grow at all, and I have tried both situations.—*C. R. D.* [It will grow best in the open border in a sheltered situation, or in a pit, and be kept in a plant-pot or frame. Just keep it from frost and too much damp in winter, and from hot sun in summer, and in a compost of equal parts of loam, peat, and rotten leaf-mould, it will succeed.]

NEW LIQUID MANURE FOR PLANTS.—We beg to inform you that we have used this summer the new patent kopros, prepared from nitrogenous matter in combination with superphosphate of lime, which is very excellent, causing the plants to grow rapidly, but robustly, and turning the foliage of a beautiful dark-green colour. It is altogether well adapted for plants generally; but for those grown in pots it is particularly valuable.—*J. Weeks and Co., King's-road Nursery, Chelsea.*

TO STOP THE BLEEDING OF PLANTS.—Recently a new unnamed plant has been sent from India to my employer; in unpacking it a shoot was broken, and the part left commenced bleeding very rapidly. Several methods were used to stop it without success. A friend calling upon me during the failure, stated that Roman cement applied to the end of the shoot in its *powdery* state would soon harden and stop the bleeding. I procured some, applied it, and it fully answered. He informed me, too, that he had used it successfully to stop the bleeding of vines; and any cuttings of plants which had a tendency to bleed, he cut clean the lower part of such cuttings, applied cement, and then immediately inserted them in the sand, &c., in the cutting-pot. This not only stopped bleeding, but it tended to induce the rapid rooting of such cuttings.—*A. B.*

BREAKING TULIPS.—I confess that the rectifying of Tulips is an interesting and "splendid mystery;" but I think their variegation is really and strictly the consequence of poverty, as manuring or rank growing demonstrates beyond all doubt that such an injudicious process renders flowers, *once light* and fine in strain, heavy and badly run. But the greatest point gained is the facilitating their breaking, by remaining so long in the same place, as the breeder colour appears by excess of poverty to be more readily extracted, leaving what we call a rectified flower. As a proof of this, I have broken several, or rather, I have had several beautiful things broken, when first they showed bloom, that was on the fourth or fifth year from seed. There is one fact which I have to make known, hitherto, as far as I know, unknown to all Tulip raisers. It has been so clearly demonstrated to me, that I cannot allow the floricultural world to be ignorant of it: it is that in preparing one of my seedling beds along the side of a line of Apple-trees, say at six yards from tree to tree, opposite and close to the roots of these trees, the number of flowers broken the first time blooming was so striking, when none, or next to none, were found in the intermediate spaces, that I could not overlook it, and therefore I at once concluded, with others of my friends, to whom I pointed it out, that poverty was undoubtedly the grand secret in Tulip breaking.—*William Willison, Flower-gate, Whitby. (Midland Florist.)*

HOW TO GET RID OF COCKROACHES.—These are often troublesome in seed-rooms, and it may be of service to state that Mr. Tewkesbury, of Nottingham, has successfully adopted the following method of destruction:—"A few years ago my house was infested with cockroaches (or 'clocks,' as they are called here), and I was recommended to try cucumber peelings as a remedy. I accordingly, immediately before bed-time, strewed the floor of those parts of the house most infested with the vermin with the green peel, cut not very thin from the cucumber, and sat up half an hour later than usual to watch the effect. Before the expiration of that time, the floor where the peel lay was completely covered with cockroaches, so much so that the vegetable could not be seen, so voraciously were they engaged in sucking the poisonous moisture from it. I adopted the same plan the following night; but my visitors were not nearly so numerous, I should think not more than a fourth of the previous night. On the third night I did not discover one; but anxious to ascertain whether the house was quite clear of them, I examined the peel after I had laid it down about half an hour, and perceived that it was covered with myriads of minute cockroaches, about the size of a flea. I therefore allowed the peel to lie till morning, and from that moment I have not seen a cockroach in the house. It is a very old building; and I am certain that the above remedy only requires to be persevered in for three or four nights to completely eradicate the pest. Of course it should be fresh cucumber-peel every night."

PHOSPHORIC LIGHT EMITTED BY FLOWERS.—In the garden of the Duke of Buckingham, at Stowe, on the evening of Friday, September 4, 1835, during a storm of thunder and lightning, accompanied by heavy rain, the leaves of the flower called *Oenothera macrocarpa*, a bed of which is in the garden immediately opposite the windows of the manuscript library, at Stowe, were observed to be brilliantly illuminated by phosphoric light. During the intervals of the flashes of lightning, the night was exceedingly dark, and nothing else could be distinguished in the gloom, except the bright light upon the leaves of these flowers. The luminous appearance continued uninterruptedly for a considerable length of time; it did not appear to resemble any electric effect; and the opinion which seemed most probable was, that the plant, like many known instances, has a power of absorbing light, and giving it out under peculiar circumstances.—*Mag. of Popular Science.*

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1. *Monarda amplicaulis*.
2. *Grammanthes chlorocephala*.



1. MONARDA AMPLEXICAULIS.
2. GRAMMANTHES CHLORÆFLORA.

“Behold the Lilies of the field, how they grow : they toil not, neither do they spin ; and yet Solomon, in all his glory, was not arrayed like one of these.”—*Matt.* vi. 28, 29.

FLOWERS! what numerous associations the word brings to the mind! of what countless songs, sweet and sacred, delicate and divine, are they the subject! The admiration and love of them is alike common to the old and the young, the great and the little, the learned and the unlearned, the illustrious and the obscure. Whilst the child takes delight in them, they have proved a source of pleasure and recreation to the monarchs of thrones, as well as to the most profound philosophers, many of whom have been extremely fond of them.

They speak a clear and intelligible language, and have often excited “thoughts that lie too deep for tears,” whilst the contemplative admirer has held companionship with them in the shady wood or sunny heath, in the spangled meadow as well as in the hedge-row side, and in that lovely spot “the flower-garden.” In each alike they have often spoken to the heart in affection, benevolence, and piety. **SOLOMON** agreed with such beautiful speech, for his “wise heart” loved the flowers, the **LILY** especially, as is evident from numerous passages in his **SONG**. The object of his love, in claiming the supreme dignity of beauty, exclaims, “I am the Rose of Sharon, and the Lily of the Valley.”

The eloquence of flowers, however, is not so fully understood as it might and ought to be. One of our poets sings,—

“Put on your brightest, richest dress,
Wear all your gems, blest vale of ours!
My fair one comes in her loveliness,
She comes to gather flowers.

F

“Garland me wreaths, thou fertile vale ;
 Woods of green, your coronets bring ;
 Pinks of red, and Lilies pale,
 Come with your fragrant offering.
 Mingle your charms of hue and smell,
 Which FLORA wakes in her spring-tide hours !
 My fair one comes across the dell,
 She comes to gather flowers.”

Another gives us the following pleasing specimen :—

“Bowing adorers of the gale,
 Ye cowslips, delicately pale,
 Upraise your loaded stems ;
 Unfold your cups in splendour—speak !
 Who decked you with that ruddy streak,
 And gilt your golden stems ?

“Violets, sweet tenants of the shade,
 In purple’s richest pride arrayed,
 Your errand here fulfil ;
 Go, bid the artist’s simple stain
 Your lustre imitate, in vain,
 And match your Maker’s skill.

“Daisies, ye flowers of lowly birth,
 Embroiderers of the carpet earth,
 That stud the velvet sod,
 Open to spring’s refreshing air,
 In sweetest smiling bloom declare
 Your Maker, and my God.”

The Emperor Dioclesian preferred his flower-garden to a throne :—

“Methinks I see great Dioclesian walk
 In the Salonian garden’s noble shade,
 Which by his own imperial hands was made :
 I see him smile, methinks, as he does talk
 With the ambassadors, who come in vain
 T’ entice him to a throne again.

‘If I, my friends,’ said he, ‘should to you show
 All the delights which in these gardens grow,
 ’Tis likelier far that you with me should stay
 Than ’tis that you should carry me away :
 And trust me not, my friends, if every day
 I walk not here with more delight
 Than ever, after the most happy flight,
 In triumph to the Capitol I rode.’”

A flower-garden was the residence of our first parents. Of it MILTON gave the following beautiful lines :—

“ Eve separate he spies,
 Veiled in a cloud of fragrance, where she stood,
 Half spied, so thick the Roses blushing round
 About her glowed; oft stooping to support
 Each flower of tender stalk, whose head, the gay
 Carnation, purple, azure, or speck'd with gold,
 Hung drooping unsustained; then she upstays
 Gently with myrtle band, mindless the while
 Herself, though fairest unsupported flower,
 From her best prop so far, and storm so nigh.”

The plants we now figure belong to “ the flower-garden;” they are very handsome, and entitled to a place in every one.

1. *MONARDA AMPLEXICAULIS*.

A very distinct and beautiful flowering *hardy* herbaceous perennial plant. It is one of the most charming in the collection of the Botanic Garden at Liege, and one of the most lovely ornaments the flower-garden contains. We have not ascertained its native country.

We have long possessed in our own flower-gardens some very pretty species of *Monarda*. The *M. didyma* has rich scarlet flowers: it is a native of North America. The entire plant has a refreshing fragrance, and many persons prefer the infusion of the leaves to the tea of China. It is the common beverage of many families of Oswega, a town in the state of New York, and it is hence called the Oswega tea.

There are nine other species, and some varieties, known, having flowers of purple, crimson, rose, lilac, and yellow colours. All are worthy a place in the flower-garden; they are easy of culture, and may be procured at a cheap rate. The flowers, when gathered with stalks, and put in water, will keep fresh for a long time, ornamenting the vase, and perfuming the apartment with a refreshing odour.

2. *GRAMMANTHES CHLORÆFLORA*.

N. O. Crassulaceæ (Synonym, *Crassula gentianoides*; *Grammanthes gentianoides*).—This very neat and pretty flowering plant is a native of the Cape of Good Hope, an annual, remaining in beauty during the entire summer. It is a dwarf spreading plant, rising four or five inches high. It flourishes either grown in pots in the greenhouse, or in patches in the flower-garden. It is an admirable plant for an edging, either for a bed or vase. Seeds should be sown in March, in pots, as is done to half-hardy annuals; the plants be potted off three, four, or more, in a small pot, and, being placed in a close frame for a short time, they soon begin to spread, and when required for the greenhouse or sitting-room window, repot as required. When it is to be grown in the open ground, they must be put out with balls entire early in May. A light sandy soil suits it best; and, being of a succulent nature, care must be taken not to give too much water. It grows freely, and blooms profusely, much like some of the dwarf Sedums. When the flowers first expand, they are yellow, with a blood-coloured V, but afterwards are almost wholly a rich blood colour, with a narrow margin of yellow.

It merits a place in every greenhouse, window, and flower-garden. The flowers fully expand when the sun shines upon them, and then appear like so many beautiful stars. Seeds may now be procured of the seedsmen, although but recently introduced.

NOTES ON NEW OR RARE PLANTS.

ACACIA COCHLEARIS.—This is one of the prettiest of this charming tribe. Leaves two inches' long. Flowers in globular balls, of a rich yellow, fragrant, and being borne in profusion, in long wreaths, render it very showy. This neat species blooms during winter.

AZALEA INDICA CALYCINA. THE LONG-CALYXED CHINESE AZALEA. —Mr. Fortune sent this plant from China, some time ago, to the Horticultural Society. It has only recently bloomed in the garden at Chiswick. It is closely allied to *A. indica phanicea*, but the flowers are much larger, being nearly four inches across when fully open. They are of a rich rose colour, strongly speckled with bright crimson spots. It is a showy blooming plant. (Figured in *Paxton's Flower Garden*, 70.)

AZALEA MYRTIFOLIA. MYRTLE-LEAVED.—Grows on the Black Mountain, in Hong Kong, China, and first seen March 1849, by Colonel Eyre, of the Royal Artillery. A shrub from four to five feet high. Flowers about an inch and a half across, *pure white*, with the three lower petals spotted with *dark violet* specks. A very distinct and handsome species. **AZALEA OVATA** also grows on the Black Mountains of Hong Kong. The flowers are *white*, with dark *purple* specks *around the centre* on *each* lobe of the flower. Very distinct and handsome.

BIFRENARIA HADWENII (Orchideæ).—A native of Brazil, introduced into our country by Isaac Hadwen, Esq., of Liverpool. It has bloomed in Mr. Hadwen's collection, and also at the Royal Gardens of Kew, on a suspended block of wood in the Orchid House. The leaves are long, a quarter of an inch broad. Each blossom is nearly four inches across; petals and sepals half an inch broad, of a pretty yellow green, beautifully blotched or mottled with a rich brown; lip large—above an inch broad, white, with striped spots of rose. A very handsome species. (Figured in *Bot. Mag.*, 4629.)

CENTRADENIA OVATA (Melastomads).—A stove herbaceous plant, from Central America. The flowers are produced in large terminal cymes, of a deep flesh colour. **CENTRADENIA DIVARICATA** is a somewhat similar plant, but more spreading. The flowers are white, but are not so numerous as the other species.

DENDROBIUM ALBUM (Orchideæ).—A native of the Iyamally Hills, in India. The flowers are of a pure white, each being two inches across. Introduced by Messrs. Veitch.

DILLWYNIA SCABRA. PEA-FLOWERED.—Mr. Drummond sent seeds of this very pretty greenhouse shrub, from Australia, to Messrs.

Henderson, of Pine-apple Place Nursery, where it has bloomed, and by them exhibited during the last summer, a medal being awarded for it. It is a free-growing bushy shrub, with foliage somewhat similar to a *Leschenaultia formosa*. It blooms abundantly, and the flowers are produced in terminal heads upon its numerous side shoots. The standard and wings of the flower are red, with yellow claws, forming an eye; the keel is of a deep purple-red. The plant is neat, and when in full bloom very handsome. It merits a place in every greenhouse. (Figured in *Mag. of Bot.*)

ECHINOCACTUS LONGIHAMATUS. THE LONG-HOOKED SPINES.—It is nearly globe-shaped, nine inches across, deeply furrowed, and the hooked spines are five or six inches long. Each flower is nearly four inches across, of a pretty yellow colour. It is in the noble collection in the Royal Gardens of Kew.

GLADIOLUS. VARIETY, WILLMORE'S WELLINGTON.—This very handsome variety was raised in the gardens of J. Willmore, Esq., Wellington-road, Birmingham, along with many other valuable varieties. It is a seedling of the *Natalensis* section, a vigorous grower, and the flowers are borne in long spikes. Each blossom is about four inches long, and as much across the front, of a deep orange-red colour. Very showy, and deserves to be one of every collection.

G. VON GAGERN.—This very beautiful variety is of the *G. Cardinalis* section (which are not so vigorous as those of *Natalensis*). Each blossom is nearly three inches across, rich scarlet, with a broad white stripe on the middle of each of the three lower petals.

G. PRINCE ALBERT.—A variety of the *Cardinalis* section. Each blossom three inches across, of a pretty blush-pink colour, and a white stripe on each of the three lower petals. This and the previous one are equally deserving a place in every collection of this charming tribe. They are figured in *Magazine of Botany*.

The following varieties of the *Natalensis*, "vigorous-growing section," are very superb, erect growers, and have very long spikes of showy blossoms:—

G. Gandavensis superbus, five to six feet high; orange shaded with a deeper colour. *G. Gandavensis aurantius*, bright orange. *G. Gandavensis splendens*, a deep scarlet. *G. Gandavensis coccineus-striatus*, three to four feet high; robust; orange, beautifully striated with orange-scarlet. These are very showy, and fit for any collection. The following have light-coloured flowers, and are particularly handsome:—*G. floribundus superbus*, white, each of the lower petals having a stripe of violet. *G. vernalis spicatus*, French white, striped with rose. *G. albicans roseus*, white, tinted with rose. *G. roseus superbus*, white, delicately shaded with blush. (*Magazine of Botany*.)

HERMANNIA INFLATA.—Said to be a native of Mexico. It is a neat shrubby greenhouse plant, growing two feet high. The flowers are produced from the axils of the leaves, in somewhat bending racemes, about four inches long. The calyx and corolla form a globe nearly half an inch in diameter. The petals are of a dark purplish-red colour.

This pretty purple-flowered will contrast well with the yellow and red-flowering species we have long had in our greenhouses. It flourishes in a sandy loam.

IMPATIENS FASCICULATA.—Seeds of this pretty Balsam were sent from Ceylon, where it grows in the hilly country, to the Royal Gardens of Kew. It is a tall, upright-growing species; the blossoms are of a showy pink colour, each flower an inch across. (Figured in *Bot. Mag.*, 4631.)

IPOMÆA PALMATA.—Captain E. Rooper collected seeds of this beautiful climber in British Kaffraria, and sent them to the Rev. T. Rooper, in whose garden, at Wick Hill, near Brighton, the plant bloomed in 1850; it also bloomed in 1851. In its wild state, it grows trailing over bushes, or climbing trees, growing in sandy soil by the river side. It bloomed so profusely that the leaves could scarcely be discerned, the flowers concealing them. Each blossom is about two inches and a half across, of a rosy-pink, slightly tinged with purple, and having five white stripes (or plaits) extending from the centre of the flower to its margin. It is exceedingly neat and handsome, and ought to be in every greenhouse. It is supposed to flourish, too, in the open air. (Figured in *Mag. of Bot.*)

NICOTIANA ALATA (Tobaccos).—A very pretty flowering tender annual, from Brazil. It grows from four to five feet high, branching. The flowers are borne in racemes. The tube of each is two inches and a half long, and the expanding five-parted end (limb) is an inch and a half across. The blossoms are white, fragrant, neat, and pretty.

PENTSTEMON GENTIANOIDES.—Some years back a species of Pentstemon was sent out under this name, having long, widish, tube-formed flowers of a crimson-purple colour. That is not the *true P. gentianoides*, but it having been discovered by Mr. Hartweg, is in future to be called *P. Hartwegii*. The true *P. gentianoides* grows four feet, or more, high. The tube of the flower is short, about an inch, and as much across the expanded wide mouth. It is termed *bell-shaped*, its form being much like a diminutive flower of *Gloxinia maculata*. The blossoms are of a bright blue outside, tinged with rose inside, and a lighter rim around the throat. The flowers are borne in long spikes, and render it a valuable plant for the flower-garden. It is perfectly hardy. (Figured in *Paxton's Mag. of Bot.*, 71.)

PHALÆNOPSIS ROSEA. THE PINK BUTTERFLY PLANT. (Orchidæe.)—It was found in Manilla, by Mr. Lobb, who sent it to Messrs. Veitch. It is said to have a spike of flowers from half a yard to two feet long. It produces a succession of its star-like blossoms for a considerable period. Each flower is an inch and a half across; the sepals and petals of a pretty rosy-peach colour, and the lip a rich ruby, with the lower portion of the labellum yellow, spotted and streaked with red. It has also bloomed in Mr. Rucker's collection. It is a charming acquisition. (Figured in *Paxton's Flower Garden*, 72.)

SPRING FLOWERS.

BY A DEVONSHIRE MAN.

EARLY in the last year's volume an article appeared on planting banks, slopes, &c., in woods, plantations, and pleasure grounds, "where walks or paths were constructed," with climbing or trailing Roses of the Ayrshire and other sections. Immediately on reading the remarks I procured a considerable number, at a cheap rate, and every such situation in the vicinity of my house, I had planted as therein directed. This was done the first week in February, and the plants being strong, they flourished admirably, and I had a fine bloom upon the greater part the past season. They were beautifully interesting, and very much added to the pleasures of a walk through the woods and other grounds.

I had also noticed a strong recommendation to plant near every frequented walk or path, *Sweet Violets*. I followed this advice too, and having a quantity of plants in the kitchen-garden, I had them distributed liberally in every likely place. They grew well, and bloomed admirably at a later period than previously-established plants. This spring I expect a profusion of Violets, the charms of which *Bernard Barton* proclaims in the following lines :—

"Beautiful are you in your lowliness,
Bright in your hues, delicious in your scent ;
Lovely your modest blossoms downward bent,
As shrinking from our gaze : yet prompt to bless
The passer-by with fragrance, and express
How gracefully though mutely eloquent,
Rejoicing in their own obscure recess
Delightful Flowerets ! at the voice of spring
Your buds unfolded to its sun-beams bright—
And though your blossoms soon shall fade from sight,
Above your lonely birth-place birds shall sing,
And from your clustering leaves the glow-worm fling
The emerald glory of its earth-born light."

The yellow, white, purple, and other variety of *Primroses*, were also liberally distributed, in accordance with the taste of a poet, who writing on this flower, says,—

"For thee, I'll rear a bank where softest moss
And tenderest grass shall carelessly combine ;
No haughty flowers shall shine in gaudy gloss,
But azure Violets mix their buds with thine."

In the woods, however, the sparkling golden-flowered wild *Ranunculus*, or Pile Wort, abounds,—

"Buttercups, that will be seen,
Whether we will or no ;
Others, too, of lofty mien,
They have done as worldlings do,
Taken praise that should be thine,
Little humble Celandine."

“ Careless of thy neighbourhood,
 Thou dost show thy pleasant face
 On the moor, and in the wood,
 In the lane ; there’s not a place,
 Howsoever mean it be
 But ’tis good enough for thee ! ”

I also added a great quantity of the very beautiful little wild *Veronica chamædrys*, perhaps better known by the name which the poet so strikingly describes,—

“ Not for thine azure tint, though bright,
 Or form so elegantly light,
 I single thee, thou lovely flower,
 From others of the sylvan bower ;
 Thou hast a spell to them unknown,
 And this my heart hath captive won.

“ Thy *name*, what is it ? The very prayer
 Affection breathes for friends most dear ;
 Whate’er their pursuits, hopes, or aim,
 Part they, or meet, thy magic name
 With silent eloquence may tell
 Her soul’s fond breathings, ‘ *Speed ye well.* ’ ”

This charming *Speedwell* is one of the loveliest walk-side ornaments. The profusion of its spikes of blossoms of a deep blue with a white eye are truly pretty.

Besides what I have enumerated, I have planted several others in quantities, of which I shall write for the April Number, I must however here observe, that with a little expense, and to myself highly interesting attention, I have formed a paradise of sweets and beauties, and rendered home even more attracting, and truly, “ there is no place like SWEET HOME.”

Similar attention, wherever practicable, if in a more limited extent, is most amply repaid.

ON THE ARRANGEMENT AND MANAGEMENT OF PLANTS IN WARDIAN CASES.

BY MR. WILLIAM CHITTY, FLORIST, OF STAMFORD HILL, NEAR LONDON.

IN following up the remarks I offered in a recent number on this subject, I would first of all say it is of importance to have them *well drained* before the soil is introduced. Although in numerous instances, no provision is made for the draining away of the superfluous water after the occasional necessary irrigation, and for that reason it may be thought unnecessary to attend so particularly to the matter of drainage as in the culture of plants in pots ; yet it will be found highly conducive to the free growth and vigour of the inmates of these CASES to favour them in this really essential particular. It may appear unnecessary to remark in this way, but in several instances that have come

under my own observation this matter has been wholly unattended to. Broken pots make a very good drainage; but a more useful material will be found to be sandstone, broken into pieces about the size of a boy's marble. This substance absorbs and retains for a long period the superfluous moisture, and the roots of plants of almost every description delight in twisting about them, and gathering support from them. The "trough" or "case" in which the plants are inserted should be half filled with drainage, over this a thin layer of turf, then a composition, consisting of equal parts of good turfy peat or box earth, well-decomposed leaf mould, and about one-fourth river sand, with a good proportion of sandstone, broken up small and well mixed with the other ingredients, will be found a good soil for almost any plant that will flourish in the close atmosphere and peculiar conditions of a "Wardian Case."

As I hinted in my previous communication, a pleasing diversity of surface may be obtained even in the circumscribed area of one of these cases, by the elevation and depression of the soil; small shells, little pieces of roots, fragments of curious stones, &c., tastefully disposed, would contribute greatly to the interest, and many plants would succeed better with such accompaniments.

The foregoing remarks are some that have occurred to me in the course of my practice, and possibly may interest and be of service to some of your readers. To those of them who have been acquainted with the FLORICULTURAL CABINET from its commencement, just twenty years ago, it must afford no small gratification to find that it has outlived the spleen of the Crocuses, the Snowdrops, and Daffydown-dillies, who were in bloom every month throughout the first year of its existence, and continues largely to minister to the pleasure and profit of its readers.

REMINISCENCES OF GARDENS, &c., IN 1851.

BY RISCEMARA.

ALTHOUGH the present winter has been remarkable latterly for the absence of severe frosts and cold weather, yet the remembrance of the flowers which enlivened our path during the former year is not without its pleasing influence, and, hoping also to interest others, I am attempting a little retrospect. In the early spring I admired the good effect produced by large masses of the *Virginia Stock*, in a garden at Woodbridge; an ample space under a noble cedar was all over bloom, and broad rows adorned each side of a walk. In the hothouse at Wisbeach I soon afterwards saw a variety of *Epiphyllum truncatum*, with flowers about two inches long, of a delicate pink, shading into white; the rare *Rhialis grandiflorus* was spangled with cream-coloured blossoms; and the elegant pink pendant flowers of the *Dielytra spectabilis*, resembling a lady's reticule in shape, and seen by me for the first time, were greeted as an important acquisition. The *Justicia carnea* was rearing its pink bushy head, and the drooping branches of the *Acacia pubescens*, with their yellow flowers and elegant leaves, formed a

striking contrast both of colour and foliage to the various beauties around them. In the greenhouse of another gentleman there is a lofty *Edwardsia* in full bloom—its boat-like yellow flowers shaded with orange—had a grand and singular effect at the end of its almost leafless branches, and contrasted well with its neighbour, the *Clanthus puniceus*; their flowers, though differing in colour, bearing some resemblance in shape. The *Aloe horrida* was handsomely blooming with scarlet flowers; the stem about four feet high; and the *Aloe ferox*, whose blossoms are yellow, was in full bud; and I was glad to see these plants are not entirely expelled from greenhouses. From thence I had the great delight of visiting for the first time the gardens at Kew. Memory and time would fail me in even attempting any enumeration of the objects which interested me there; the New Holland House was rich indeed with floral specimens of Dryandras, Banksias, Acacias, &c., and the curious way in which a species of *Achrostichum alaicorne*, or Elk's-horn Fern, is grown, apparently only stuck upon an upright piece of wood, excited my curiosity to know where its roots were, and whence their nourishment was derived. How wonderful is the Palm House, with its Screw Pine, Caffre Bread, &c. ! The front of Westerfield House is adorned by a double yellow Banksian Rose, and, being covered in the spring with primrose-looking flowers, is an object of uncommon interest; the tree is about twenty-five feet high, and of corresponding breadth, and is an unusually luxuriant specimen. In the summer I was gratified by having three varieties of hardy *Yuccas* in flower at the same time, viz., the *ternuifolia*, *glaucescens*, and *filamentosa*, and regret this curious tribe of plants is not more cultivated. A creeper, new to me, graced my greenhouse, viz., the *Scypanthus elegans*, or *Loava elegans*, with its numerous yellow goblet-shaped flowers. Late in the autumn, after admiring the superb collections of cut Roses and Hollyhocks in the Crystal Palace, I was surprised to see the interior boundary of a churchyard in the Isle of Wight entirely formed of what appeared to me to be the Spanish Broom, which, being fully in flower, formed a remarkable looking hedge; and the little church of St. Lawrence had close to its walls a complete edging of pink Valerian. On the bold chalky cliffs leading from Fresh-water Gate to Alum Bay, I detected the exquisite little blue flowers of the *Gentiana acaulis*, as I supposed it to be by the leaves, as well as miniature flowers, but, except in size, resembling our garden specimens; and walking on the Cliff, on the Blackgang Chine side of Freshwater, to inspect a stone memorial marking the spot near which a young gentleman was found, at the edge of the sea, lifeless, having, it was supposed, fallen down the lofty rocks, and not being missed by the numerous party of which he had formed one till their return to Lymington. I saw close to this affecting monument a quantity of turf had been pared off, and a blue carpet had supplied the place of the grass, formed of a very dwarf pale blue *Campanula*. The hedge-sides were often cheered by the pink *Erythraea*; but I was disappointed not to find more Ferns in the picturesque island.—A dilapidated cottage at Bonchurch had a beautiful *Myrtle* growing into its ruined thatch, in full flower; and on the other side of the road a

window was enriched with the scarlet blossoms of the *Rochea falcata*. At Southampton, my attention was attracted by the lovely yellow flowers of the *Euknidium Bartonoides*, in the window of a nurseryman; it was in a pot, and blooming so late in the year seemed likely to prove an acquisition. In the shady bowers of Milton Abbey, in Dorsetshire, a fine plant of a very bright and new scarlet *Lobelia* suddenly greeted our eyes. The village of Milton is planned with much taste; small white houses stand on each side of a gently-sloping road, each intersected by a Horse Chesnut; and when these noble trees are in flower the effect must be beautiful, though my utilitarian notions led me to regret they were not *Walnut-trees*. Again I visited Kew, but much prefer the wonders presented there in spring to the effect in autumn; houses I had so much delighted in were without plants, but the Cactus-house was full of wonders, and also the Museum. A *Statice* in a pot, and the brilliant flowers of the *Tritoma uvaria*, were much admired; the latter should be more grown, if hardy in our climate. [It is.—EDITOR.] I added to my own collection the very pretty pink *Polygonum vaccinifolium*; it was in full flower out of doors till the unexpectedly severe weather entirely and suddenly destroyed the beauty of the gardens. I have been watching the powers of endurance of cold, without protection, of a purple *Diosma*, an *Acacia armata*, now promising abundant blossoms, *Veronica speciosa*, and *Cereus flagelliformis*. The *Diosma* flowered much earlier last spring than its rooted cutting did in the greenhouse, and the *Cereus*, having survived last winter, flowered on its rock-work bed, in an eastern aspect, to my great surprise, in the summer. Whilst I am writing, although the Snowdrops are sparingly visible, the *Rhododendron Dauricum*, *Chimonanthus fragrans*, *Jasminum nudiflorum*, *Tritoma media*, and *Garrya elliptica*, are beautiful objects in my garden, and greatly enrich the bouquets for the house.

SIKKAM HIMALAYAN RHODODENDRONS.

DR. HOOKER's publication on the Rhododendrons of Sikkim Himalaya is now completed in "three parts." There are particular descriptions given of forty-three species, and the work being of folio size, corresponding sized coloured figures of thirty-one species are given. The whole species are arranged as follows. We give an extract of each, so that our readers obtaining any of these fine and interesting species may ascertain whether they be correct, as well as to assist in making a selection.

I. Calyx obsolete; corolla campanulate (bell-shaped), hemispherical at the base; stamens eighteen to twenty (rarely ten); ovary (seed-vessel) ten to twenty-celled; trees with ample leaves, and capitate (headed), often crowded, flowers.

R. FALCONERI (Plate 10).—Tree, thirty feet high; flowers white, ten-lobed, divisions at the outer edge of the flower in close heads.

R. HODGSONI (Plate 15).—Bush, twelve to twenty feet high; large leaves, silvery beneath; flowers pale rosy-lilac, eight to ten-lobed, and in close heads.

R. ARGENTEUM (Plate 9).—Tree, thirty feet high; leaves large; flowers a pure white, in large heads.

II. Calyx cupular, hemispherical, or scutelliform, obsoletely lobed; corolla campanulate, five-lobed; stamens, ten to sixteen; ovary, six to sixteen-celled. Large flowering shrubs, with very *glabrous* leaves.

R. AUCLANDII (Plate 11).—Noble species, four to eight feet high; leaves large; flowers white, veiny, tinged with pink, broad and shallow. (Synonym, *R. Griffithii*.)

R. THOMSONI (Plate 12).—Bush, eight to fifteen feet high; leaves broad, flat; flowers campanulate, and of a deep brilliant blood-red colour. Magnificent species.

R. CANDELABRUM (Plate 29).—Bush; flowers sulphur-coloured, edged with rose. A variety.

III. Calyx subfoliaceous, five-parted; corolla funnel or bell-shaped, tube long; stamens, ten to eighteen; ovary, five to six-celled. Shrubs, frequently epiphytes (growing upon other trees, &c.), leaves lepidote beneath.

R. DALHOUSIE (Plates 1 and 2).—Finest of the race. It is an epiphytal shrub, six to eight feet high. Leaves medium size; flowers very large, having a lily-like fragrance; white, changing to a delicate rose tinge.

R. EDGORTHII (Plate 21).—Fine shrub, medium size, often pendulous from trees or rocks. Leaves large; flowers large, white, two or three together.

R. BARBATUM (Plate 3).—Tree, forty to sixty feet high. Flowers rose-coloured, in compact heads. *R. LANCIFOLIUM* (Plate 4) is a variety of Plate 3.

R. CILIATUM (Plate 24).—Shrub, two feet high, hairy. Leaves large; flowers purplish, in small clusters.

R. GLAUCUM (Plate 17).—Handsome shrub, two feet high. Leaves small; flowers a bright rosy-pink, in large clusters.

R. PUMILUM (Plate 14).—Smallest of these Rhododendrons; very neat. Roots among moss, growing three to four *inches* high. Flowers on long stalks, rich pink.

IV. Calyx small, or obsolete, rarely five-toothed; corolla bell-shaped, or with the limb (end) contracted below its base, and half-funnel shaped; stamens, ten; ovary, five to ten-celled. Shrubs.

R. CAMPBELLII (Plate 6).—Fine tree. Leaves narrow; flowers rosy-scarlet, in close round heads. (Synonym, *R. nilagiricum*).

R. WALLICHII (Plate 5).—Shrub, eight to ten feet high. Leaves broad, elliptic; flowers a lilac-rose.

R. ÆRUGINOSUM (Plate 22).—Shrub, four feet high. Leaves blunt; flowers lilac, in large heads.

R. WIGHTII (Plate 27).—Handsome shrub, ten feet high. Leaves large, flat; flowers pale yellow, spotted with red, in large heads.

R. LANATUM (Plate 16).—Shrub, the young wood covered with a white cottony appearance. Flowers sulphur, spotted with red.

R. FULGENS (Plate 25).—Shrub, four feet high. Leaves broad, woolly beneath, purplish; flowers rich blood-red, in close round heads.

R. CAMPYLOCARPUM.—Bushy, six feet high. Leaves short, broad; flowers pure sulphur, without spots, in large heads. Charming species.

V. Calyx short, leathery, five-lobed; corolla funnel-shaped, tube narrowed; stamens, ten to twenty; ovary, five to ten-celled. Shrubs, with leaves lepidote beneath.

R. MADDENI (Plate 18).—Fine shrub, six to eight feet high. Leaves sharp-pointed, bright rusty beneath; flowers white, long funnel-shaped, in heads of three or four together.

R. CINNABARINUM (Plate 8).—Small elegant shrub, with small pendulous cinnabar-coloured flowers.

R. ROYLEI (Plate 7).—Small shrub. Leaves oval; flowers a rosy-copper tinge, tipped with blue in the bud.

VI. Calyx subfoliaceous, five-parted; tube short, tinged at the base; lobes patent, hollow; stamens, five to ten; style subclavate; ovary, five-celled. Shrubs, often small; epiphytes or terrestrial, with leaves densely lepidote (except *R. pendulum*).

R. CAMELLIÆFLORUM (Plate 28).—Small slender shrub, pendulous from trees or rocks. Leaves brown beneath; flowers white, two or three together, resembling a single Camellia.

R. PENDULUM (Plate 13).—Small pendulous epiphyte. Flowers white, two or three together.

R. SALIGNUM (Plate 23).—Pretty shrub, two to four feet high. Leaves narrow; flowers yellow, spreading, and shallow.

R. ELEAGNOIDES (Plate 23B).—A pretty diminutive plant, growing in clumps, like heather. Leaves small; flowers varying from yellow to purple, broad and shallow, almost like a *Cistus*.

VII. Calyx five-parted; lobes short, rounded; tube short, funnel-shaped; divisions of the limb narrow-pointed, spreading entire; stamens, eight; style slender; ovary, five-celled. Azalea-like flowers.

R. VIRGATUM (Plate 26).—Small shrub, glabrous, four feet high. Flowers small, purplish-red.

R. TRIFLORUM (Plate 19).—Shrub, four to six feet high. Flowers greenish-yellow, in three's together. A variety of the last.

R. NIVALE (Plate 26B).—Small depressed shrub, spreading half-a-yard or more. Leaves small; flowers rose-coloured. It is very fragrant, resembling the Eau de Cologne.

R. SETOSUM (Plate 20).—Elegant plant, nearly a foot high. Leaves leathery; flowers borne in profusion, a lively rosy-purple colour. It is much like *Rhodora* in appearance, but has brighter flowers, and leaves Box-like. It diffuses a strong aroma for some distance around.

CULTURE OF THE GLADIOLUS CARDINALIS AND ITS VARIETIES.

BY JAMES SMITH, GARDENER, OF LEAMINGTON PRIORS.

It has been with much pleasure that I have noticed the great improvement which has been effected in this lovely race of plants, by a considerable number of most beautiful hybrids which have been raised both

on the Continent, and more especially in our own country, by Mr. Plant, of Cheadle, and Mr. Cole, of Birmingham. From these sources I have procured all the varieties they have sent out, as well as a number of the continental ones.

This tribe of flowers has long been a pet of mine, and the long term of my practical experience enables me to give particulars of a mode of culture the results of which I have not seen equalled elsewhere.

The bed is an oblong square, which forms the boundary of one side of a flower-garden four feet six inches wide and fifty-one feet long. I plant in it five rows, which comprises 375 plants. The soil was thrown out to the depth of eighteen inches; four inches of broken bricks was spread over the bottom, upon which a layer of chopped turf was laid, and then filled up with the following compost, which had been prepared a few months previous in the compost yard. Equal parts of good fresh loam, sandy peat, old rotten cow-dung, and well-rotted leaf-mould, the surface of the bed being a few inches higher than the general ground. About the middle of October I planted the bulbs four inches deep, pressing the soil around each. Having descriptions of the heights the respective kinds usually grow, I arranged them so as the centre row contains the tallest, and the lowest ones in the outer rows. At the approach of severe weather, I have a wooden frame-work, four inches thick, around the bed, and the frame at the north side is a few inches higher than the front. On this frame-work, in severe frost or heavy continuous rain, I have some glass lights placed over, which, being four feet six inches long, the water at the front drops into a small half-circular sunken sheet-iron spout, which conveys it to the drain grate, and the bed is preserved from excess of wet; when the weather is mild, the glass is removed. Of course, this kind of protection is only casual, and only adopted under severe circumstances, to keep the frost from injuring the tender foliage which has pushed under ground, or when it has pushed above ground. Where there is not the provision of spare glass lights, other temporary covering can readily and cheaply be provided. The tender leaves must be saved from injury by frost, or the bloom will be weakened, and the embryo spike probably damaged. When the weather, in spring or summer, is dry, I give occasional waterings, twice of soft pond-water to once of liquid manure; a tank of the latter is in the farm-yard, and at all times ready for such purposes. The liquid manure is not poured upon the bulb or foliage at any time, but between the plants; but the water is applied sufficiently each time to moisten the entire soil. This watering is only occasionally necessary, but contributes much to a *vigorous* growth, and the more vigorous will be the bloom, and the *finer* the bulbs become, and thus a longer spike of flowers will be obtained, in proportion to the size of the bulb, the following year. The flower stems are duly secured to a stick. When the bloom is over, and the leaves become yellow, the bulbs are taken up, and all offsets separated, &c., and the bed is filled by plants in pots provided for such necessities, and which are removed in October, for the replanting of the Gladioluses.

By the mode of treatment I pursue my plants and flowers are half as large again as any I ever saw, either in gardens or at exhibitions, and most amply repay for the little attention.

THE NERIU M OLEANDER.

BY CAPTAIN DOUGLAS.

IN your Magazine I find some inquiries about the cultivation of this handsome race of flowering plants. In the early part of my manhood I travelled thousands of miles in the countries where this fine-blooming shrub (*N. oleander*) grew naturally and flowered magnificently. Twenty years ago I returned to England, where I have remained at a paternal home in Devonshire. My admiration of this plant in its native climes endeared it to me in my own country, and the culture of *flowers* being my *hobby*, I have obtained, and now grow, the species, and twenty-three of its varieties, and with much success. I have followed (as far as artificial means admit) a treatment to correspond with that in which I have seen immense thousands of it flourish luxuriantly.

In their native countries the plants have a *long dry season of rest*, and a *short wet season of rapid growth*, terminating with a splendid display of lovely flowers. These variations I have endeavoured to supply. Having a hothouse for plants, a greenhouse, and pit frames all heated by hot-water pipes, &c., I possess facilities for the purpose.

When the plant has done flowering, I cut back the shoots, so as to leave only two buds on each, and place them in the stove, where, after carefully watering (not too much), young shoots soon push, and when they are an inch or so long one only is left (the other rubbed off) on each part of the old shoot, and the plant is then repotted, reducing the ball carefully at the side, so as to loosen the fibrous roots, in a compost of equal parts of peat, strong loam, and well-rotted cow-dung, with a sprinkling of *bits* of charcoal. A liberal drainage of two inches of broken pot, so that the water may not stand in a saucer so *high* as the *soil*, but only to the depth of the broken materials; for although the plant flourishes with an abundance of water at the roots during their blooming season, given in a saucer in which the pot stands, yet when so supplied to plants in pots, if the soil be constantly soddened, it soon causes it to become sour; but the roots will push amongst the broken pot, and fresh water being given, the beneficial effects of that element is derived by the plant, and the soil is not soured. After being potted, it is kept in the stove, plunged in a tan-bed, or placed in a hot-bed frame where the pot can be plunged; the growth of the new wood is promoted, and if the roots become abundant, a repotting is necessary; but I do not repot after the end of July, because it would keep the plant growing too long, to the prevention of the wood becoming consolidated and duly ripened during summer. When the new shoots are about six or eight inches long, the plant is removed to a warm, sunny, but airy situation, out of doors, where it remains till the approach of cold weather, when it is taken into a cool greenhouse. No water is given whilst here till the first week in February; it then has a good soaking, and in a week or ten days is taken into the stove, and it soon pushes forth its head of bloom, and is highly ornamental during April and May.

Where there is not the advantage of a stove to promote the rapid growth and maturity of its new wood, a hot-bed frame, deep enough,

or pit frame where there is bottom heat, will be equally available. The great object to be attained is to get the new wood vigorous and well ripened by the end of autumn, the embryo heads of blossoms being *then* formed at the end of each shoot; this being effected, the plant will bloom satisfactorily each season in the greenhouse. If there be a greenhouse *only*, and no other facility to push on its early growth, then have a double number of plants, so that one-half may bloom one year and the other the succeeding, when the plants would have one year to provide blooming wood, and then bloom the following. This can be certainly accomplished by cutting in the plant that blooms in 1852 in March 1853, letting it push shoots, then repotting it, and cutting away where too many. Grow it in the greenhouse till August, and place it out of doors, &c., to consolidate and ripen; such prepared plants will always bloom the following year in the greenhouse. Manure water should occasionally be given during the time of growth, to promote the vigour as much as possible.

MISCELLANEOUS SECTION.

REMARKS ON THE EPACRIS.—This is one of the loveliest tribe of greenhouse plants, and especially valuable, as they can be grown so as to have a fine display of bloom during the entire winter and spring months. In fact, by a course of proper treatment, some may be had in beauty through the entire year. The plants, having due attention in potting, watering, air, &c., grow freely and bloom most profusely. Where a collection is desired, the party ought to repair to the nursery establishments, and almost every species and variety may be obtained at a cheap price. In procuring plants, select *BUSHY* ones of a small size, but likely to be feathered (as it is said) down to the pot. The plants should be *YOUNG*, so that by pinching the leads occasionally they soon become bushy, and by such stopping are easily kept in that condition in future. They flourish best in a turfy, sandy peat, which has been obtained for a year or so, broken into small pieces, not sifted, and amongst it a portion of broken pot, brick, or charcoal. A cold frame, or shallow pit frame, is the best place for the plants during summer; they receive a due portion of air, and dry winds do not operate upon the roots. Shade from mid-day sun in hot weather is essential. Take care that worms are prevented entering the pots. A thick bed of coal-ashes makes a good bed to stand upon. The plants must be duly watered, care being taken not to *overdo* them, or they will soon die. In hot weather, let the bed of coal-ashes be well watered just before evening; the evaporation during the night is very beneficial, and the roots are cooled by it. Summer is the season for providing the blooming shoots for the autumn, winter, and spring blooming, and the young wood must be *well ripened* during that period; therefore, from the latter part of August, do not shade the plants; let them have full sun, and let them be kept rather dry, to check their growing and promote the ripening process. Whether the plants are kept in a greenhouse, or cold frame, &c., they must have little water during the winter. But

in order to bring some of the earliest blooming into flower in autumn, as well as winter, they must be taken to a warmer part of a greenhouse or other proper place, where, being kept warmer, they soon after begin to blossom. A succession is easily provided. Where there is a stock of plants, cut back and repot, at successive times, from February to May, and afterwards promote the growth and maturity of the wood, taking the ripest plants into a higher temperature first, and follow with others in similar course. No plants are more readily cultivated than the *Epacris*, if proper attention be paid, and they amply repay for it. Cuttings strike readily in white sand, and a young stock is easily kept up, but, if not, young plants may be bought for a mere trifle. The following are the handsomest, and the selection has been made from all the best collections in and around London. Any person desirous of making additions to their greenhouse may rely on the accuracy of the descriptions.

Epacris mucronata, bell-shaped, snowy white, in heads.

E. coccinea, tube one inch long, rich deep scarlet.

E. albidula, tube one inch, bell-shaped, pure white.

E. hyacinthiflora, three parts of an inch, bell-shaped, a beautiful rosy-blush; superb.

E. alba-compacta, one inch long, wide tube, pure white; fine.

E. campanulata-rosea, half an inch, bell-shaped, beautiful rose; superb.

E. campanulata-rubra, size and form of last, but of rosy-red colour.

E. limatis, one inch, bright pink, with white tip.

E. sanguinea, one inch, deep blood-red; fine.

E. nivea, half an inch, bell-shaped, white; pretty.

E. variabilis, half an inch, bell-shaped, a beautiful pink.

E. rubra-grandiflora, half an inch, bell-shaped, in bud bright red, pretty pink when open.

E. ternatus, one inch, pretty pink, with white tip.

E. impressa, nearly one inch, a beautiful flesh-colour; neat and pretty.

E. autumnalis, one inch, vivid crimson; showy.

E. microphylla, white, in very long spikes; neat and pretty.

A London Amateur Plant-grower.

HORTICULTURAL SOCIETY, *Feb. 17*.—Mr. Franklin, gardener to Mrs. Lawrence, of Ealing Park, received a Knightian Medal for a nice collection of Orchids, consisting of *Zygopetalum rostratum*, *Oncidium Cavendishii*, and the handsome *O. unguiculatum*, a well-coloured variety of *Lycaste Skinneri*, and *L. tetragona* (?), a good example of *Ansellia Africana*, *Cyrtorchilum maculatum*, and cut flower spikes of the charming *Amherstia nobilis*. Mr. Wooley, gardener to H. B. Ker, Esq., contributed a well-cultivated *Cypripedium insigne*, bearing some fifteen or sixteen blossoms; a Certificate of Merit was awarded it. Messrs. Henderson, of Pine-apple Place, sent *Araucaria Cookii*, even a handsomer species than the Norfolk Island Pine itself; a pretty hybrid *Begonia*, and *Franciscea confertiflora* and *eximea*. The Rev. Mr. Beadon, of Northstonham, furnished a boxful of striped

Camellia flowers, gathered from a south wall, where they had received no artificial protection whatever, in order to show what kind of weather is experienced in Hampshire: the blossoms were exceedingly fine, without speck or blemish. The Hon. W. F. Strangways also sent examples of the mildness of the climate of Dorsetshire, in the shape of an exceedingly interesting collection of cut specimens of flowering shrubs and herbaceous plants, all grown out of doors at Abbotsbury. Among them were Hellebores, purple Rhododendrons, *Azara integrifolia*, with very pretty tufts of yellow flowers; *Fuchsia splendens*, finely in blossom; *Pulmonias*, red and blue; *Saxifraga ciliosa*, the rare and beautiful Scorpion Iris (*I. alata*), the pretty *Lithospermum rosmarinifolium*, which is worth growing, even under glass, on account of its beautiful bright blue blossoms, and several other plants, all finely in flower. It was mentioned, with reference to the Scorpion Iris, that it refused to flower until it was planted within reach of the spray of the sea; although it grew satisfactorily in a more inland situation, yet it would not blossom. Mr. Epps, of Maidstone, sent a small bit of the white-flowered *Cereus anguliger*, and flowers of the very fragrant *Edgeworthia chrysantha*. W. Everett, Esq., of Chase-side House, Enfield, contributed examples of a mode of glazing without putty. In these the glass was laid flat, in grooves, between strata of cork; thin pieces of cork were then placed between the edges of the glass, the latter being pressed from the bottom upwards with sufficient force to indent its edges into the cork, which is then shaved neatly off, and the whole is secured firmly in its position; this has been proved to be perfectly water-tight and efficient. This plan of glazing was stated to be as suitable for windows as for garden purposes, and in addition to others it has this advantage, the panes can at any time be moved, or, when broken, new ones put in without trouble or inconvenience.

ROT IN THE AURICULA.—There is one fatal malady to which this fine flower is liable—that is the *rot*. This may be attributed to two causes, viz., improper compost, and allowing water to lodge in the hearts of the plants. An experienced cultivator can instantly perceive, by the peculiar smell, when disease is in the collection. When a plant is seen with its head leaning to one side, and the outer leaves assuming a purple hue, having also a strong disagreeable smell, then rot has commenced. Plants so infected must be immediately removed to a distance from those in health, otherwise the whole collection may be swept off in a very short time. I tried every sort of experiment to cure this scourge. The only remedy that was successful was to take the plant out of the pot, wash it well, and with a sharp knife cut away all infected parts, and dust the wounds with charcoal; and after allowing the plant to dry for a few hours, repot it in a mixture of leaf-mould, loam, and sharp sand.

To guard effectually against the rot, never allow the plants to have any heavy rains; and purchasers cannot be too careful in having their plants from a healthy stock. I lately saw large collections in such a state that I would not have taken the whole in a compliment, knowing that I should only be introducing the plague into my own stock,—*G. Lightbody, Scottish Gardener.*



WE refer our readers to the last month's Calendar for many things which require attention now, which we avoid repeating. Finish pruning Roses. Many kinds of shrubs may be increased by layering, similar to Carnations. Perennial herbaceous plants increase by division. Hardy annuals, to bloom early, may be sown. Bedding plants must be provided by sowing, striking cuttings, repotting last autumn-struck cuttings, &c. Sow Stocks, Asters, &c., in pots or beds.

FLORISTS' FLOWERS.—*Auriculas* and *Polyanthuses*: admit air on all favourable occasions. Manure water should be given once a-week. Sheep's-dung, put into a tub, and soft water poured upon it, in quantity so as to form a strong liquid, is very serviceable. The dung must be collected for a few weeks before using. Old cow-dung will also answer the same purpose. Sow seeds of above. If too many blossoms show, thin them directly.

Anemones and *Ranunculuses* must be finished planting immediately. If no bed has been prepared for them, it may be made by taking out the soil to the depth of fifteen or eighteen inches, and replacing it at the bottom with a layer three or four inches thick of cow-dung, and filling up with soil composed of *decayed* turfs taken from a loamy pasture. Such as were planted in the autumn will now be making their appearance above ground. It is very necessary to keep the soil closed firmly round the crown of the plant; when this is neglected the bloom suffers. *Tulips* require continued attention, as directed last month. Any that happen to be affected with canker will appear sickly; the roots should be examined, and the damaged part cut clean out. If left exposed to sun and air, the parts will soon dry and heal. Avoid *frosty air* getting to the wound by exposure. If by any casualty the plants are frozen, then, early in the morning, sprinkle the tops over with cold water, and keep them covered over for an hour or so before they be exposed, as the sun must not be allowed to shine upon them until the frost is all out. *Carnations* and *Picotees* may, at the end of the month, receive their final shifting. The pots known as No. 12's are the size usually employed. In potting, place at the bottom two inches deep of crocks, to give free drainage. Use a compost—which is best if it has been previously prepared and become well incorporated together—of these proportions: two barrows full of fresh yellow loam, three of well-rotted horse-dung, and half-a-barrowful of river sand, well mixed: plant in it *without sifting*, by breaking very well with the spade. Place the plants in a sheltered situation out of doors, and let them be carefully looked after. Where frost has disturbed the roots of

Pansies in beds, they should be pressed into their places, and a top-dressing of rich mould given to them, all over the bed. They *must* be screened from cutting winds by fir, yew, or whin branches. In forming new beds the situation must be where there is the benefit of free air. Plants in pots, under glass, will require shifting into larger sizes, for as this is the period when they begin to grow, they will soon become weak, and bloom out of character, if confined in small pots. If beds of *Pinks* were not planted in autumn, early in this month they may be. In removing the plants, whether out of pots or open ground, be careful to retain all the ball of roots, and as uninjured as possible. Protect beds from cold easterly winds.

IN THE FORCING STOVE.

Sow seeds of any tender and half-hardy annuals that have been omitted. Sow liberally of *Cinerarias* and *Chinese Primroses*, for if the plants be properly attended to, they will produce a fine bloom for autumn. In watering tender annuals, &c., it must not be over the tops, or many of the sorts will be rotted by it. The best method is to flood over the surface of each pot, always using tepid water. Annuals sown in frames—*Cockscombs*, *Balsams*, *Thunbergias*, &c.—if large enough to pot, should be in 60-sized pots.

Sow seeds of *Dahlias*, *Fuchsias*, &c. Seeds of most greenhouse plants will do well if sown now. Repot and forward *Amaryllises*, *Gesnerias*, &c., as directed last month. *Ipomeas*, *Echites*, and similar plants, may be trimmed in, disrooted when necessary, and brought here to excite early growth.

IN THE GREENHOUSE, &c.

Continue to admit all air possible. Repot the various inmates, as required, from time to time, and examine to see that the drainage is free. Supply *Cinerarias* with manure water occasionally. Save them from green fly; smoke or tobacco water must be applied at the first attack. Pot off seedlings, &c., for successive bloom. Immediately stop the shoots of *Pelargoniums* which are to bloom from June, in order to induce new lateral ones. Let *Pelargoniums* have plenty of air, but close up early in the afternoon. Syringe overhead twice a-week after shutting up. In watering, give enough to moisten the entire soil.

Cupheas, *Calceolarias*, *Verbenas*, *Petunias*, *Fuchsias*, and other young stock, must, as growth advances, have the shoots stopped, which will cause them to be bushy, forming cuttings of the young shoots.

Camellias exhausted with flowering should now receive a little extra attention; remove them to a cooler situation for three weeks, on the principle of slow breaking, and give the root a chance of overtaking, in some degree, the expenditure which has taken place in the system. Any pruning necessary perform at this time; no plant can succeed better, after judicious pruning, than the *Camellia*.

See that *Lilium speciosum*, &c., are not saturated by watering.

BRIEF REMARKS.

SELECT INDIAN AZALEAS.—Junius wants to add to his collection a few of the best, and such as have flowers very distinct, and of good shape. (The following will do):—

Azalea indica alba-magnifica. This is an admirable pure white variety, of exquisite form, and the petals of thick substance.

A. alba-lutescens, pure white, spotted with red, and tinged with yellow; very pretty.

A. alba-striata, white, striped with pink; very pretty.

A. triumphans superba, large, and of a rich damson colour.

A. splendens, orange-pink, very showy.

A. refulgens, rich deep scarlet, large, free bloomer; superb.

A. Knight's Exquisite, violet-pink, with red spots, and white border; pretty.

A. Duke of Wellington, flower large, petals of thick substance, superb form, and a pretty rosy scarlet; very fine.

A. Iveryana, white, striped with red; very fine.

A. Ardens, rich scarlet, fine form.

A. violacea superba, rich purple-violet, fine and showy.

A. variegata, salmon-pink, with a white border; very pretty.

A. sinensis, a deep yellow, which strikingly contrasts with others.

THE HOLLYHOCK.—This noble growing flower is now become an essential for every garden, as well as for Floral Exhibitions, and whoever (having a garden) saw the splendid specimens shown at the London Meetings during the past season, must have felt an anxiety to possess a collection. And as they now may be procured at a very reasonable price, and being so easy of cultivation, surely the gratification will be indulged in, and we may expect to have a numerous class of exhibitors the coming season. It is necessary that Committees of Floral Societies should provide in their schedules for two classes of exhibitors, as amateur growers and gentlemen's gardeners cannot be expected to have facilities for competing successfully with nurserymen and the florist-dealers. Due encouragement ought to be given to amateurs and gardeners. I am an extensive amateur grower, and by planting a portion in autumn, I have a fine display of flowers as early as July, which continue for some time in fine display, but by planting another portion early in February, these plants come into bloom by the end of August, and continue in full beauty till the end of October. By this simple process I have a lengthened floral season of their magnificent flowers. The plant requires a rich loam of medium character, not light, neither clayey. Equal parts of good loam (not all to be old spent loam but should be mixed with new), and well-rotted dung, on a dry substrata, and a sprinkling of bone and charcoal dust, with a liberal supply of water during summer, will suit them, and in such a compost they will grow very vigorous, and have flowers of a proportionate improved size. The finest varieties are given in the accounts of floral exhibitions, and have usually been given in your Magazine. I can however recommend the following:—Walden Gem, deep crimson; Comet, ruby-red; Golden Queen, yellow; Enchantress, deep rose; Queen of England, bright pink; Eclipse, veined maroon; Lady Harland, white, superb; Magnum Bonum, rich dark crimson; Rosea grandiflora, light rose, superb; Rosea alba, rose and white; Mr. Charles Baron, salmon-pink; Obscura, silvery-puce; Queen, light blush; Sulphurea perfecta; Watford Surprise, white, dark inside; Delicata, French white; Black Prince; General Bem, vivid scarlet; Beauty of Haverhill, silvery lilac, beautifully veined; Aurantia, salmon and orange. The above eighteen are superb in form, many of them very large flowers, and comprise an admirable contrast. Old established plants have usually a crown of young shoots pushed in spring; when such are from one to two inches long, cut clean away all spare ones, insert them in a pot, firmly in a sandy loam, and place them in a frame, where there is a trifling heat, shade them awhile and they soon strike root. If there are no crown shoots to spare, single eyes of the shoots may be similarly potted and they will readily root, these may be got from June to August. Take a shoot cut horizontally close under the bud, and two inches above it, insert them firmly.

PELARGONIUMS BEST SUITED FOR EXHIBITION PURPOSES. (*By Venus*).—Last year ORION favoured us with a list of the best twelve varieties for this purpose,

being those selected by a number of the most eminent growers and exhibitors. That list is inserted in the February Number, and the names are given in ratio according to their merits, and stand as follows:—

Constance, F.; Magnificent, Fo.; Gulielma, B.; Pearl, D.; Centurion, B.; Forget-me-not, L.; Negress, G.; Alonzo, F.; Star, B.; Emily, B.; Conspicuum, F.; Virgin Queen, A.; Mont Blanc, S.; Orion, F.; Ariel, F.

(F. Foster; Fo. Foquet; B. Beck; D. Drury; L. Lyne; G. Garth; A. Arnold; S. Story.)

The following varieties (it appears by a correspondent of the Florist) are the first eighteen kinds which have been the oftenest in the winning collections at the exhibitions in or around London, the last season, and are arranged according to their frequency, as follows:—

Star, Forget-me-not, Gulielma, Rosamond, Pearl, Centurion, Salamander, Rowena, Constance, Negress, Norah, Maes, Lalla Rookh, Orion, Crusader, Mont Blanc, Prince of Orange, Ajax.

It may be safely concluded, that those in the first list, selected by the eminent exhibitors in the spring of 1851, are *first rate* for exhibiting; and those in the last list, being the most general in the winning collections at the subsequent shows, are also well adapted by form, freedom of bloom, colours, &c., for showing, and persons desirous of *now* procuring specimens for such purposes, may safely make a selection; for whilst the varieties are of excellent form no doubt, they are very distinct in colours and markings, thus producing a desirable and striking contrast. We are not to conclude, however, that there are no others of good properties, some such are yet scarce, not having been pushed forward by the raisers, and others being yet too high priced to be generally possessed.

CONIFERÆ.—Every year gathers up additional facts relative to the hardness of many of the new and rare Coniferæ, which have but very recently been introduced. At page 460 we have given an account of several pines which have withstood the severity of our climate for three or four years; and the information which comes to us from various sources shows that much remains yet to be known in regard to locality, soil, exposure, &c., before we can safely pronounce a tree not to be hardy. We have, we believe, before mentioned, that *Cedrus deodara*, in a soil where the least moisture stands about its roots in winter, often loses the ends of its branches, while in a dry locality it is as hardy as our native hemlock; and we have recently noticed, in our foreign journals, that the *Cryptomeria japonica* in Scotland, in cold, damp soils, is almost sure to be destroyed, while in a dry one it has come out of the winter unharmed. These facts show that we should not hastily decide upon the hardness of a tree, but await the trial of experiments in various soils and exposures. We look forward with high expectations of many valuable additions to our hardy trees and shrubs from California. Mr. Prince, of Flushing, has returned after three years' sojourn there, and in a supplementary catalogue which he has forwarded us, we notice no less than forty species, among them two magnificent evergreen oaks, a California Bay or Laurel, with splendid evergreen foliage, an evergreen Photinia, with clusters of snow-white flowers, an arbor vitæ, forming a tree one hundred feet high, *Pinus californica*, *ponderosa insignis*, &c. *Cupressus mexicana*, *Juniperus mexicana*, and others. These will all undoubtedly prove hardy, especially in the middle states, and will be most important additions to our already increasing variety of trees and shrubs. It only remains now for our nurserymen to take hold with energy, and propagate a good stock of all the finer species and varieties, and test the hardness of those of which there are doubts, that gentlemen may know which to buy and which to reject. Some information of this may be obtained by knowing the native habitat, and the country from whence they were introduced. But there is no such satisfactory way of ascertaining the requisite information as by actual trial.—*Hovey's Magazine*.

BLINDS FOR GLASS HOUSES.—The plan I have adopted for the last three years for covering my greenhouses, conservatories, forcing-pits, and cold-pits, during winter, is this:—I have had a canvas covering made the size of the roof, which is dressed over with a composition of boiled oil and litharge (one covering was dressed with boiled oil, litharge, and yellow ochre); but the first composition is the best, I find, because it is more transparent; this is nailed on to the rafters, as close as possible to the upper part of the roof; the other end of the canvas is nailed on to a roller, which rests on the lower ends of the rafters, and is kept in its proper place

by two hooked irons fixed to the rafters. At one end of the roller is a wheel fixed, the outside diameter about fourteen inches, with a groove for the cord to run in, about one inch and a half wide and the same in depth; there is an iron pulley fixed in the wall above the roof, exactly in a straight line with the wheel, and about six inches above the roof; the cord is fixed into the groove of the wheel by a nail, just slipped through the pulley on the top; and thus the roller, with the covering attached, is drawn up and down with the greatest ease. To prevent the wind from lifting it up, I have two or three brass knobs fastened into the sides of the roof, about four feet apart, and a corresponding strip of leather sewed on, to the covering, with a button-hole to each. Supposing the roof to be too high to reach from the ground, to button these strips, you have merely to use a short ladder. I have found these coverings to answer admirably, and without any trouble. If you wish to remove them in the spring, you have only to draw out the nails which attack the covering to the rafters. I ought to have said, that when the covering is let down, the roller, as a matter of course, rests on the irons at the bottom of the roof. I use the same sort of rollers and the thinnest calico for shading the conservatories, &c., in summer.—*J. W., Gardener's Chronicle.* [We have used such coverings too, and found them very valuable.—EDITOR.]

GLASS WALLS.—In our Number for January we noticed these structures. Since that time we have received many letters relative to them. Questions proposed, defects supposed, and praises bestowed. Our answer to all at present is, Mr. Ewens, the inventor, is proceeding in a right direction, and merits the thanks of all horticulturists for what he has done, besides deserving the best means of encouragement by the liberal support of all interested in cultivating fruits and flowers.

The advantages, and value of their application, can only be ascertained but by *practical evidence*, this can only be realised during an appropriate period. Walled-in gardens may have glass walls erected in them without being liable to the casualties of damage to which other walls would be exposed to. Their adaptation to the successful growth of fruit is excellent. Difficulties have been named by some, relative to some supposed inconvenience in admitting a due proportion of air, not proper access to the trees, &c. Not one such objection is worth entertaining a moment, all that is required in either of the things above named, and any other *necessary* to grow fruits equal, if not even superior, to what they have been grown under any other circumstances, can be realised inside glass walls.

LUCLIA GRATISSIMA. (*J. Simpson.*)—As soon as the plants have ceased blooming, remove them into a shed where they can just be kept from *frost* and *damp*. Withhold water, nearly wholly, for about three weeks. Then cut in the shoots so as to leave two buds on each, and so as to have a nice shaped head for next season. After pruning place each plant where it can have about 60° of warmth, and when the buds break re-pot it, and raise the temperature to 65°. A *moist* temperature is best, and the plant delights in *shade*; *full sun* and *dry wind*, are destructive to it at *any time*, avoid these. When the new wood has pushed from six to nine inches, stop them by pinching away the leads. This throws strength into them, and by July the plants may be removed into a greenhouse, or other sheltered place out of doors, in order to get the new hardened and perfected properly. By the beginning of September place one plant into the forcing-house, it will soon push bloom; and once a month after introduce others, so that you will have a succession for several months. The plants become habituated to bloom at the same period in successive seasons. If you therefore have them duly treated each season, they will answer every expectation. We have seen the *Luculia* in bloom from the beginning of September to the end of March.

COTONEASTERS TRAINED AS STANDARDS.—In your Magazine for last December you inserted a list of beautiful winter berry-bearing shrubs and trees for windows, flower-gardens near dwellings, &c. *Cotoneasters* were included. I have some *trees* of them on my lawn, which are from three to four yards high. They are single stemmed, about a yard high, and branches, pyramid-formed, to the very top. The branches fall very gracefully down to the grass, covered with white flowers in summer, and loaded with rich red berries throughout winter and spring. They are easily trained to Standards, and grow rapidly. The kinds I have are *Cotoneaster microphylla*, *gracilis*, *affinis*, and *frigida*.

I have two plants in a shrub border, with stems three yards high, and a large uniform spreading head. They have a pretty effect, growing behind some dwarfer

evergreen in front, and a row of spruce firs behind; the rich coloured berries appear beautiful.—*R. N. Somersset.*

HYACINTHS. (*E. H. S.*)—I should feel obliged by your opinion on the following subject in your next Number.

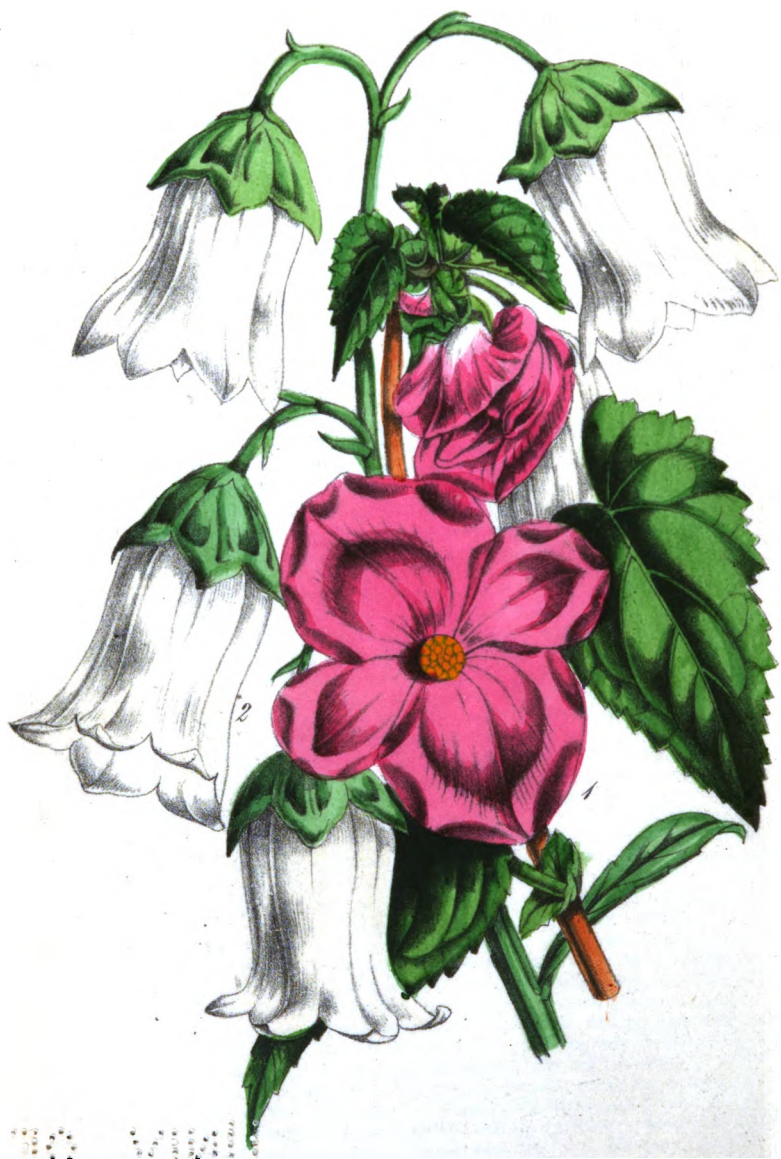
I have a lot of Hyacinths in pots, and many of them are throwing up offshoots. Ought I to remove them by cutting them off, or will they weaken the one bloom if allowed to remain. [The number of its blossoms is determined, and will expand (barring accident), but the larger development of the petals can be promoted by the greater supply of nutriment. If you retain the offsets, you expend upon them what otherwise employed would contribute to the increased size of the blossoms.]

PRESERVING DAHLIA ROOTS. (*A Subscriber.*)—After the frost cut off the foliage and flowers, I immediately cut the tops off to about four inches from the ground, and raised the roots a little with a fork to prevent them pushing shoots, and put a little soil over the roots. About a week afterwards I dug them up, placing them in the sun, taking them in. Two or three days after the weather became frosty and foggy, they were then put into a tub, covered with straw, and so remained; in a few days the weather becoming mild, I placed them in the sun as before; decay now appeared, and as they did not improve after a time they were put into a box in the kitchen, and now (January 2nd) all are dead.

I shall be glad to know where I have erred. Likewise give me the names of eighteen varieties of self-coloured and edged Dahlias that are good and constant. Also twelve of the fancy class. [Plant your Dahlias early in order to have the main stem well ripened at the early part of autumn. When frost is expected let the main stem be protected, with a cone of dry chaff, dry ashes, dust, chopped straw, or dry leaves, eight or more inches high, covering it with a sprinkling of soil to prevent it being blown away. This preserves the crown of the root from injury by frost. When soil only is heaped up around the stem, it often becomes wet, and a strong frost occurring, it tends to the main stem and crown of the root being damaged fatally, though it may not be fully apparent for some weeks after; the more unripe the main stem is, the greater its liability to be injured. As soon as the tops are destroyed by frost, cut them down, so that the main stem (with some of its side ones shortened) is left half a yard, or more, long from the crown of the root. Have the roots taken up at once, and if a small portion of soil adheres to them, let it remain. Remove the roots into a plant-house or pit, where there is a gentle heat, place the roots apart from each other, and get the stems dry as soon as can properly be done. In two or three weeks the tops may be cut off to about two or three inches from the crown. With such treatment we have not lost more than one out of an hundred roots during many successive years. We repeat plant early, get the main stem well hardened, preserve it from being operated upon by frost, and allow a long stem to remain at the first cutting of the tops, that there may be means for evaporation, and dry the stem in a plant structure where there is a gentle heat. Afterwards keep from frost and damp, and not a root will perish. List of names in our next.]

TROPÆOLUM LOBBIANUM.—This beautiful *Tropæolum* is worthy of a place in every collection where plants are required for winter flowering. Out of all our collection of creepers, this is by far the most showy at this season of the year. I have ten fine specimen plants of it, which have been a complete mass of flowers ever since the middle of October last. As it does not produce seeds freely, it is advisable to propagate it by cuttings, which should be selected in June or early in July. I always place single cuttings in small pots filled with sand, and plunge them in a little bottom heat. As soon as they are well rooted, I pot them into 6-inch pots, and place them in the greenhouse. With proper treatment, they will be ready to receive their final shift into 12-inch pots about the end of August, using soil composed of equal portions of sandy loam and peat, with thoroughly-decomposed horse-manure and a quantity of good sharp sand, to keep the compost porous. After this final shift, I place a wire trellis to each plant, firmly securing it to the pot. They are then placed in the stove, and, as soon as the plants commence rapid growth, every shoot is carefully trained, so as to cover the trellis regularly over. By the end of September this is complete, and the plants will be showing hundreds of bright orange flowers. As soon as the blossoms fully expand, the plants may be removed to the conservatory or greenhouse, where they will continue to produce a succession of flowers for a long time.—*S. T., Lichfield.*—*Gardeners' Chronicle.*

THE
OF
COLUMBIA



1. *Begonia Martiana*
2. *Campanula Vidalii*



1. BEGONIA MARTIANA.

2. CAMPANULA VIDALLII.

“Now hazel catkins, and the bursting buds
Of the fresh willow, whispered SPRING is coming ;
And bullfinches forth flitting from the woods,
With their rich silver voices ; and the humming
Of a new-waked bee that passed ; and broods
Of ever-dancing gnats again consuming,
In pleasant sunlight, their re-given time ;
And the germs swelling in the red shoots of the lime.

“All these were tell-tales of far brighter hours
That had been, and again were on their way ;
The breaking forth of green things and of flowers
From earth’s breast ; from bank and quickening spray,
Dews, buds, and blossoms, and in woodland bowers,
Fragrant and fresh, full many a sweet bird’s lay,
Sending abroad from the exultant spring,
To every living heart a gladsome welcoming.”

“Not worlds on worlds in phalanx deep
Need we to prove a God is here ;
The DAISY, too, fresh from winter’s sleep,
Tells of His hand in lines as clear.

“For who but He who arch’d the skies,
And pours the day-spring’s living flood,
Wondrous alike in all He tries,
Could rear the DAISY’s rosy bud ?

- “ Mould its green cup, its wiry stem ;
 Its fringed border nicely spin,
 And cut the gold-embossed gem
 That, set in silver, gleams within ?
- “ And fling it, unrestrain'd and free,
 O'er hill, and dale, and desert sod,
 That man, where'er he walks, may see
 In every step, the stamp of God.”

1. BEGONIA MARTIANA.

The entire tribe of Begonias is a very interesting one. Most of them are very free bloomers, and some of them have immense branching panicles of semi-transparent flowers. They bloom generally in winter and spring, and require to be cultivated in the stove, where they display their lovely delicate flowers, producing a charming appearance, more particularly so at the seasons when flowers are especially valuable. The species we have figured does not require the temperature of a hothouse, but flourishes and blooms freely when grown in the GREENHOUSE, or PIT-FRAME, where it forms a charming ornament ; and by potting, and starting plants in the hot-bed at successive times, it may be had in bloom all the year. It is a *tuberous*-rooted perennial, the top dying down after having done blooming : water must then be gradually lessened, to allow the roots to have a season of rest. It grows about two to two-and-a-half feet high, forming a neat plant, and is easy of cultivation. The blossoms are often larger than those from which our figure is taken, and are delicately handsome. It succeeds admirably, too, in a dwelling-room window, where, as well as in every greenhouse, it merits a place.

2. CAMPANULA VIDALLII.

This charming graceful flowering plant was discovered at Flores, one of the Azorean Islands, and seeds were sent to England in 1850. We first saw the plant in bloom in the establishment of Messrs. Osborn and Sons, of Fulham. It is a “ *half-shrubby* ” plant, which produces several branches, each of which rises about two feet high, terminating in a paniced-spike of fine drooping flowers, which are very ornamental. Its graceful habit and free-blooming character render it a very valuable plant for the flower-garden. It succeeds well, too, when grown in pots, and is ornamental for the greenhouse in summer. It is easy of cultivation, raised readily from seed, and thus a stock of young plants may be raised every year. It requires a little protection during winter, from the severest weather. It ought to be grown in every garden, contrasting beautifully with the rich colours of other flowers.

NOTES ON NEW OR RARE PLANTS.

ARAUCARIA COLUMNARIS. THE PILLARED.—(Synonymes, *Dom-beya columnaris* ; *Araucaria Cookii*.)—A native of New Caledonia, where Mr. Moore, of the Botanic Garden, Sydney, recently discovered

it, and has introduced it into England. There is a superb figure of it in the Botanical Magazine, Fig. 4635, and the following remarks are recorded relative to this fine species. "To Captain Cook, the great circumnavigator, in his second voyage, however, is due the first discovery of this *Araucaria*, in the little islands of New Caledonia. On one of the western small isles was an elevation like a tower; and over a low neck of land, within the isle, were seen many other elevations, resembling the masts of a fleet of ships." And again, "a few days after, as we drew near Cape Coronation, we saw in a valley to the south of it a vast number of those elevated objects before mentioned; and some low land under the foreland was covered with them. We could not agree in our opinions of what they were. I supposed them to be a singular sort of trees, being too numerous to resemble anything else; and a great deal of smoke kept rising all the day from amongst those near the Cape. Our philosophers were of opinion that this was the smoke of some internal and perpetual fire. My representing to them that there was no smoke in the morning would have been of no avail had not this internal fire gone out before night, and no more smoke been seen after. They were still more positive that the elevations were pillars of basaltes, like those which compose the Giants' Causeway, in Ireland. On nearing the island a few days after, every one was satisfied they were trees, except our philosophers, who still maintained they were basaltes." To the commander "they had much the appearance of tall pines, which led to my giving that name to the island." At length Captain Cook landed, accompanied along with the Botanists. "We found the tall trees to be a kind of spruce pine, very proper for spars, of which we were in want. On this little isle were some which measured twenty inches in diameter, and from sixty to seventy feet high. My carpenter, who was a mast-maker, was of opinion that these trees would make exceedingly good masts." The wood is white, close-grained, tough, and light. It appears, no perfect cones were found by the party. It is said "the first tree of this, noticed by Captain Cook (in 1774), as elevated like a tower, still (1850) stands, and is in a flourishing condition. Its appearance now is exactly that of a well-proportioned factory chimney, of great height." The young plants at the Royal Gardens of Kew grow very freely, in light loam and leaf mould. This *Araucaria* shoots out its branches like all other pines, with this difference, that the branches of these are much smaller and shorter, so that the knots become nothing when the tree is wrought for use. Captain Cook observes further, that the largest of the trees he saw had the smallest and shortest branches, and were crowned, as it were, at the top, by a *spreading* branch of shoots, forming quite a wide bush. The young leaves are about a quarter of an inch long, laying rather close to the stem, and the shoot clothed with its leaves is about one-third of an inch through, being the thickness of a strong goose-quill. Each branching head has ten or twelve of these shoots. The cones are about five inches long, and nearly as broad, of a brown colour. They are produced terminal on the shoots. It is a highly interesting, handsome, evergreen tree.

BILLBERGIA THYRSOIDEA.—A perennial "Pine-apple"-like plant from Brazil; the leaves are not mealy, but of a bright green. The head of flowers is about six inches long; and three across. The bracts and flowers are of a rich crimson colour, very showy. It has bloomed in the stove at the Pine-Apple Place Nursery. (Figured in *Paxton's Flower Garden*, 74.)

CHÆNOSTOMA LINIFOLIUM. FLAX-LEAVED. (Synonym, *C. fasciculatum*.) From the Cape of Good Hope. It is a small growing shrub, very neat, and blooms profusely. The flowers are produced in terminal racemes, each blossom has a narrow tube nearly an inch long, the five parted limb (top of flower) is nearly half an inch across. They are white, with a yellow-mouthed tube. Seed sown, &c., the plant can be cultivated in all respects as a tender annual, and succeeds well under such treatment.

COMMELYNIA SCABRA. N. O. Spider-worts.—It is a half-hardy, perennial plant, discovered in the north of Mexico, by Mr. Hartweg. It forms a tuft of straggling stems variegated with red. The flowers are terminal, eight to ten together; each blossom an inch across, of a purplish-brown colour. It does very well out of doors, in the border, in summer, but must be protected in winter.

CYNCHES AUREUM. THE GOLDEN SWAN ORCHIS. — A stove Orchideous Epiphyte, from Central America, introduced into England by Mr. Skinner. The flowers are produced in a close raceme of eight to ten inches long; each flower being three inches across, of a pale clear yellow. (Figured in *Paxton's Flower Garden*, 75.)

ECHEVERRIA RETUSA. N. O. House-leeks. — Mr. Hartweg collected seeds of this fine species in Mexico. It is a half-shrubby plant, fleshy leaves, and grows from one to two feet high. The flower stem is from nine inches to a foot long, bearing at its summit a compact panicle of handsome crimson flowers, covered with a delicate bloom, and orange-coloured inside. Each blossom is nearly an inch long, and half that across. This tribe blooms freely through winter, from November to April, either in the greenhouse or room window, flourishing in a light mixture of sandy loam with leaf mould, and plenty of sand. (Figured in *Paxton's Flower Garden*, 73.)

ECHINOCACTUS RHODOPHTHALMUS, VAR. ELLIPTICUS. RED-EYED. —The trunk is almost conical, tapering at each end. The spines are an inch and a-half long, of a reddish colour. The flowers are produced at the summit, of a rosy-pink colour; each being nearly three inches across. In the Kew Collection. (Figured in *Bot. Mag.*, 4634.)

EUCALYPTUS COCCIFERA. COCCUS-BEARING GUM-TREE.—A native of Van Diemen's Land, growing there on the mountains. There is a tree of it in the nursery of Messrs. Veitch, twenty feet high, having a very graceful appearance, and endures the open air uninjured. It blooms freely, trained against a wall, at the end of summer in the Royal Gardens of Kew. The leaves are lance-shaped, three inches long. The flowers are ornamented by very numerous yellow stamens,

and produced in terminal many-flowered corymbose heads. Each blossom an inch across. (Figured in *Bot. Mag.*, 4637.)

LILIUM SINICUM. THE CHINESE LILY.—Mr. Fortune sent bulbs of it from China to Messrs. Standish and Noble, of Bagshot, in 1850. It requires to be grown in the greenhouse. Flower stem a foot high, bearing two or three small scarlet flowers.

OLEARIA GUNNIANA.—A moderate-sized evergreen bushy shrub, from Van Diemen's Land. A plant is trained against an open wall, in the Royal Gardens of Kew, where it flourishes and blooms copiously towards the end of summer and autumn. The leaves are small, something like those of some of the *Ceanothuses*. The flowers are white, with a yellow centre, daisy-like in size and form. It is a charming plant for a wall, or open ground in a warm situation, and very showy when in bloom. It succeeds well, too, in the greenhouse. (Figured in *Bot. Mag.*, 4638.)

OXYANTHUS TUBIFLORUS. LONG-FLOWERED. N. O. Rubiaceæ. (Syn. *Gardenia tubiflora*.)—A moderate-sized stove shrub from Sierra Leone. It has been for many years in the Royal Gardens of Kew. Leaves five inches long, broad. Flowers produced in terminal heads, six to eight together. The tube of each blossom is six inches long, about as thick as a wheat straw, the end terminating in a five divided limb, of narrow segments, the flower when expanded being two inches across; at first they are white, and change to a yellow white. (Figured in *Bot. Mag.*, 4636.)

SOPHRONITE CERNUA.—The plants belonging to this Orchid genus are found on old trees in Brazil, nestling among moss. They are of small size, but in bloom are very pretty. The above species has small flowers, an inch across, of a brilliant scarlet colour, with a yellow lip.

S. GRANDIFLORA.—The flowers are of a bright scarlet, or cinnabar colour, with a yellow lip. Each blossom is three inches across; very showy.

S. VIOLACEA. — Discovered in the Organ Mountains of Brazil. Flowers of a violet colour.

S. PTEROCARPA.—The flowers are produced in terminal racemes, of three in each. A blossom is an inch across, of a rosy-purple colour. (*Paxton's Flower Garden*.)

VIOLA PYROLEFOLIA. PYROLA-LEAVED VIOLET.—This is the yellow-flowered violet which Messrs. Veitch sent out a year ago, under the name *Viola lutea*. No doubt they did not know it had previously been discovered, and named by Poiret, *Viola pyrolæfolia*. Messrs. Veitch's collector found it in Patagonia. It has been discovered in Chili, as well as the Straits of Magellan, and had been named by Cavanilles, *V. maculata*; by Dombey, *V. glandulosa*; and by Commerson, *V. lutea megaphyllos*. It is a beautiful flowering *hardy* herbaceous perennial plant.

ROSE PRUNING, &c.

BY MR. H. STILLWELL, OF PINE APPLE NURSERY, EDGEWARE ROAD, LONDON.

(Continued from page 31.)

In your last Number I noticed the best or proper time for pruning Roses generally. I shall here notice the best way how to manage or prune some of the yellow-flowering kinds. Under this head I shall notice the following :—

1. Double-yellow Scotch.
2. Harrison's yellow.
3. The Persian yellow.
4. Austrian.
5. Lutea, the yellow Banksia.

The above kinds, as well as many others I could mention, very much dislike the knife. The best time to prune or cut back some of these is as follows :—

Nos. 1, 2, 3, and 4, should be cut back as soon as out of flower in summer. By this method we shall get well supplied with new wood for the next season. Leave the thinning out until the following February. No. 5 at this time must be well thinned out (leaving too much wood is against the flowering of this Rose), and neatly nailed or tied, as circumstances may require. Cutting back is not necessary for this rose. Why I mentioned nailing or tying it, is because we find the Rose against the house or out-buildings generally.

CULTURE OF THE CAMELLIA.

BY MR. H. STILLWELL, OF PINE APPLE NURSERY, EDGEWARE ROAD, LONDON.

NOTICING that a correspondent, in the March Number, requests information on this noble tribe of plants, I forward the following practical remarks, hoping they will prove serviceable.

The culture commencing from March.—We consider the plants now to be in full bloom, in a cool-house. Examine your plants daily to see if they require watering, as we now have increasing warmth from the sun. The plants, too, will require more attention, as to air, &c. As soon as they have done flowering, go through the whole of them, and with your knife cut away all ugly branches, taking care to form your plants neat and compact. After this is done, let re-potting be your next consideration. Shift those that require it into larger pots, and keep your plants in a growing state, placing them in a cool-house, or pit, as is most convenient to the grower, taking care to break the plants gently. Keep your plants here until you see they have completed their new shoots in growth, which you will see by the terminal buds. The next thing to be attended to is the situation where they are to be placed in the open air. It must be where they will be shaded from the heat of the mid-day sun; here they may remain till some time in September, that time, of course, will depend upon the state of the weather. When you bring them in, place them in a cool-house or pit, as they want only

just to be kept from severe frost and excess of wet. Each year the plants require the same course of treatment, and no part of it requires more care than the pruning.

The compost used for the successful growth of the *Camellia*, we find, from some persons, vary very much. The following always answers admirably. Three parts good brown loam, one part peat soil, with a small portion of good sand, well mixed together, and having a liberal drainage.

CULTURE OF THE PHAIUS TRIBE OF PLANTS.

BY MR. JOHN WILLIAMS, OF HATCHAM HOUSE GARDENS.

THIS fine and interesting tribe of stove plant comprises several most singularly beautiful productions from China, some of which have long been inhabitants of our stoves, under the name of *Limodorum*s, then *Bletias*, but now *Phaius*. We nevertheless frequently witness unsuccessful attempts to cultivate this plant, so as to ensure a fine show of its singular and beautiful flowers. When properly managed, few plants present a more gay appearance when in flower. We have here one plant, of *P. grandiflora*, in a pot twelve inches in diameter, which in November last, threw up nine stems, four feet long, each of which continued for three months to unfold a succession of its lovely flowers; we therefore flatter ourselves that we have been tolerably successful, and, consequently, venture to offer, for the consideration of your readers and inquirers, a few observations thereon; not, however, presuming to have it thought that no other method would be equally successful. The plant in question is one with many others (when growing in the limited space of a flower-pot), that may be greatly injured by being over-abundantly watered; any plants producing abundance of roots naturally suggests the idea of requiring abundance of food: but here it becomes the duty of the cultivator to inquire what that food should be. Water is, with undoubted propriety, considered to be the medium through which plants are supplied with food, and is generally applied with a liberal hand to such as are provided with abundance of roots: with the *Bletia Tankervilleæ* we may easily err; for although, as long as the soil is open, and the pots well drained, a liberal supply of this element may be required, yet when the plants have attained about the maximum of their growth, the pots will have become crowded with roots to such a degree as will very materially interrupt the passage of water through them: such being the case, water more sparingly, so as not to keep the roots in a constant state of saturation, and, on the other hand, not suffering them to become absolutely dry; for though the plant is so tenacious of life as to be able to live for a considerable time in either of those extremes, to succeed creditably, both must be avoided. The compost we use consists of equal parts of brown, strong loam, peat, and leaf mould, with a moderate portion of broken pot. Potting is regulated by the season of flowering, and may be performed immediately after the flowers are gone, when they are potted with balls entire; but when the plants are to be divided,

it is better deferred until the young offsets have emitted their roots a few inches; they may then be carefully separated from the parent, and potted in pots of a smaller size. We have recovered unhealthy plants by shaking them out of the pot, and washing every particle of soil from the roots, repotting them in the compost above named.

POINSETTIA PULCHERRIMA.

BY AN ADMIRER.

THIS noble flowering plant is fully deserving the most earnest attention and careful management, in order that it may be so grown as to produce its flowers as perfect in our stoves as those grown at Philadelphia, where, it is stated, the beautiful scarlet whorls of bractæ which terminate the branches measure as much as twenty inches across, and are equal in colour to the finest tints of *Rosa Sinensis*.

It is decidedly a splendid feature among our ornamental winter blooming plants, and, from its habit, we feel confident it may be cultivated with the application of the common treatment given to stove plants. It must be kept in rather a close moist atmosphere in the stove, along with other tender plants, all of which are now and then syringed over when the weather is fine, in order to prevent the attacks of insects or the accumulation of filth. In the day, if fine, a free circulation of air is kept up; and at night the temperature of the house averages from 65 to 70 degrees. The soil used, and which seems to suit well, is very sandy loam; in potting, care is taken to ensure a good drainage, and as soon as the roots reach the inside surface of the pot, an additional shift is *immediately* given, so that the growth is never checked, and the plant in consequence is kept continually progressing. It requires a great supply of water at the roots. Plants procured in spring will furnish noble specimens for next autumn or winter's bloom; and a plant now cut down will supply cuttings which are easily struck in heat, and a stock of young plants for later bloom will be obtained. The large heads of rich crimson flowers are now in much request in London, and are fine ornaments in the dining and drawing-rooms, &c. Also the smaller sized specimens are taken to the assemblies by visitors.

PROPAGATING TREE PÆONIES.

BY A TRAVELLER IN CHINA.

I OBSERVE an inquirer has recently asked for instructions on this particular, and having resided in China for seven years (returning to England two years ago), I have seen a great deal of these plants propagated by the Chinese, and the following modes are adopted, with surprising success; not more than one in a hundred ever fails.

BY SEEDS.—These are often obtained very perfect, and to some extent seedlings are raised, sowing them in pots, and transplanting into

the open ground to bloom, but this is not so generally practised as are the following methods.

BY SUCKERS.—When suckers are produced by an old plant, the earth is carefully removed from about its roots, which are laid bare till the whole of the union of the sucker with the parent root is uncovered. They are then separated, but the wound of the whole plant is suffered to remain exposed for a day or two till its surface dries; dry earth is then placed about it, and care is taken that no moisture is applied for the space of a fortnight afterwards. The young sucker is enwrapped in fresh leaves, in which state it is kept till the lower end becomes shrivelled, and so much contracted, that the two opposite sides touch each other. It is then planted in rich earth, which is rather dry than otherwise, and kept well shaded till it has rooted; care being taken to guard it from frost.

BY SPLITTING.—When the operation of splitting the stem is performed, an old plant is selected, and its stem is regularly slit into four or six equal portions, from *the top to the very bottom* among the roots; the divisions of the stem are kept apart until the wounds begin to dry, when the middle of the stem is filled with a sort of plaster, made with mortar and rich earth, among which is mixed fat and a small quantity of sulphur. The plant so prepared is suffered to remain till the autumn, when each division is fit to be separated, with the portion of the root belonging to it.

Grafting is practised on the roots of the more common Moutans; when this is attempted, the root of the stock is laid bare during some weeks, to the depth of three or four inches; just before the autumn shoot is made, the earth is again heaped about the root, and soon afterwards, when the sap appears in full motion, the operation is performed. This is done in the way we call crown grafting. A kind of clay made with rich mould, formed into a sort of mortar with the expressed juice of Herbaceous Pæony roots, is then applied about the scion and stock. The plant is afterwards shaded from the sun, and protected from frost during winter; and when the spring arrives, it is left to take its chance. If the scion ever pushes, all danger of losing it is past.

ORNAMENTAL CLIMBING PLANTS FOR THE FLOWER GARDEN.

BY A SOUTHERN FLOWER GARDENER.

THREE years ago I had to thin a plantation of forest trees, and a number of Spruce Firs were cut down. The neatest formed tops of about sixty I had taken off from three to six feet long, and they were placed in an open dry shed, where the leaves gradually perished and dropped off. My object in making such a selection was, that when the leaves were all dropped off, I wanted to have climbing and trailing plants to run over the framework of these denuded trees. All the bark was stripped off, so that they had a neat and unique appearance: the side branches were left entire, and there being several tiers of these, retaining all their slender branchlets, they formed a novel and neat

appearance; they were painted green. I raised a number of the best Climbers, which by the end of May were strong and healthy. The plants I had provided, which were raised by seeds, by sowing early were strong, and about the first day of May, I turned out of pots fine plants of the following named. They flourished abundantly, bloomed profusely, and each tier of branches was quite covered over with the plants, and their beautiful flowers. From the ends of the branches a number of shoots hung pendant, and had a pretty appearance. These Climbing ornaments were placed in circular beds; some of them had only one plant in each, whilst others in larger circles had one in the centre, and the rest of the bed filled with the usual kinds of showy flowers, as *Geraniums*, *Calceolarias*, *Cupheas*, *Fuchsias*, &c. The flower-garden is oval, of half an acre, and a gravel-walk around. At the outer side of this walk there is a piece of grass two yards broad, which has circular and other formed beds, and in some of these beds the Climbers were arranged. They had a very pretty effect, and each tier of branches being shorter than the one below it, up to the summit, rendered them particularly ornamental. Their height varied in proportion to the size of the bed; the largest bed had the tallest tree framework, and the lesser ones in proportion. Having some cold pit-frames, which are kept dry in winter, I raised seedling plants in August, and potted them off three or four into a pot. I kept them through winter: they are fine by the turning-out time, and extend in proportion, producing a profusion of bloom, which, in some instances, literally cover the support with flowers.

My Climbers consisted of the following plants. *Maurandia Barclayana*, and the variety *Rosea*. *Eccremocarpus scabra*, *Lophospermum maculata*, *Hendersonii*, and *Cliftonii*, *Convolvulus major*, *striatiflora*, *bicolor*, and *elegans*, *Tropæolum Lobbianum*, *Canariense*, *Moritzianum*, *pentaphyllum*, *tricolorum*, and in a shady place the *speciosum*, *Scypanthus elegans*, *Thunbergia alata alba*, and *aurantiaca*: the situation near the conservatory being warm, these flourished admirably. A strong branchy plant of *Passiflora cærulea*, also a similar one of *Sollya heterophylla*, *Solanum jasminoides*, *Clematis Sieboldii*, two plants at each place. All the above being strong plants, and grown in well-enriched fresh loam, upon a dry bottom, flourished most admirably. Similar plants trained, and suitably placed in the interior part of a flower-garden will always have a pretty effect, and break the monotony which often prevails.

TREE CARNATION.

“ Rich in a thousand beauteous dyes,
The sweet Carnation stood.”

“ Let yon admir’d Carnation own,
Not all was meant for raiment, or for food ;
Not all for needful use alone ;
There while the seeds of future blossoms dwell,
’Tis colour’d for the sight, perfum’d to please the smell.”

DIANTHUS CARYOPHYLLUS, VAR. FRUTICOSA. THE SHRUBBY CLOVE CARNATION.—The generic name “*Dianthus*” is derived from *dios*, divine; and *anthus*, flower. “Divine-flower,” or, as some ancient writers term it, “Jove’s Flower.” It is now made the emblem of “lively and pure affection.” The CARNATION was a flower in high estimation in Queen Elizabeth’s time, and was often celebrated by the poets of her day. Spenser, who was remarkable for his care in retaining the old manner of spelling, calls them CORONATIONS, probably because they were specially used on these occasions, and from hence the name “Carnation” is a corruption. Some writers are of opinion they were called “Carnation” after a *flesh colour*, which was so distinguished; whilst others affirm that “*that colour*” was so named from the tint of the “Carnation flower.”

“Carnation’d like a sleeping infant’s cheek.”—LORD BYRON.

The name of CLOVE was given from the perfume being similar to that of the “spice” so called, and the flower was, on that account, frequently used to flavour dainty dishes, as well as liquors.

The Clove Carnation was held in esteem as early as the time of Augustus Cæsar, at which time flowers were esteemed one of the luxuries of the Romans, who seldom sat at their meals without wearing chaplets of fragrant blossoms, and as novelty has ever had its charms, a new flower possessing a spicy fragrance would naturally excite considerable attention, for it appears the Romans had discovered the Clove during this reign in Cantabri, in Spain, and from thence it was conveyed to Rome.

The Clove Carnation was cultivated in England five hundred years ago, for during the reign of Edward III., it was used to give a spicy flavour to the ale and wine served at the Royal table, from which this flower derived the name of “Sops in Wine.” From that time to the present it has been one of the most esteemed flower-garden ornaments.

The exact time when the TREE CARNATION (or the WINTER BLOOMING) was produced we have not discovered, but there is no doubt of its being the progeny of a “Clove Carnation.” The first having a shrubby habit, had large flowers of a rich crimson-red colour, and was considered an essential in the stoves and greenhouses of the wealthy in England during the last century. Another Tree Carnation had during this period made its appearance, having a light ground with rosy-red stripes. But our Florists recently have turned their attention to hybridizing with the previous kinds, especially the Florists of the Continent, a most charming race of beautiful varieties have been raised, not only having very distinctive colours, but being deliciously fragrant, equal in perfume to the original Clove-scented. They are of desirable habit, bloom freely, and flower during the entire winter; as by proper treatment they can be had in bloom at other seasons, they are valuable acquisitions for the stove, greenhouse, parlour-window, &c., and are excellent additions for bouquets and similar purposes.

Rather an extensive number of them have been brought over into our own country from the Continent during the last two years; a descriptive

list of the best we annex below, plants of which may be obtained of the Nurserymen and Florists.

They are easy of cultivation, cuttings striking freely. The best time is from the beginning of March to the end of April, and such being potted off singly, and duly encouraged in growth, make fine plants to bloom through the following winter and spring. Cuttings should be obtained that are in a *growing* state, and it is advisable to place the plants from which cuttings are wanted at the early part of March in a warmer temperature, in order to push the shoots a little. Each cutting must be cut through close below a joint, and the stronger they are the more successfully they strike root. A mixture of fine sifted loam, and silver sand, equal parts, is suitable for striking in, having the pot about half full of broken crock, &c. When plants have shoots suitable for cuttings, they may be readily struck at any other season. They should be placed in a frame where there is a slight bottom heat, or be similarly assisted in striking.

The plant blooms well when grown in two parts good fresh loam, and one part in equal portions of well-decomposed cow-dung and leaf-mould, with a liberal sprinkling of silver sand, and small pieces of charcoal, also having a good drainage of broken pot and chopped turf over it. During summer the plants must be placed in the open ground, where they can be shaded from mid-day sun, and where they will have a free air; also to have a bed of ashes to plunge the pots in half their depth. Thus placed, they will require regular supplies of soft water, and when the young plants are about six inches high, cut off the leading shoots, which will induce the production of laterals, by which means the plants will be bushy, and by similar attention onwards they may be furnished from the bottom to the final summit with blooming shoots. Repotting must be done as the state of the plants require additional root room. Thus duly attended to, by the end of summer the plants will be furnished with a desirable supply of blooming buds, a weakly plant should not be allowed to retain more than its strength indicates, or it will soon perish. Before frost occurs, the plants must be taken in; such as are wanted to bloom first be placed in the greenhouse, and others into a cold-pit frame, or similar place of protection, and be introduced into the greenhouse at subsequent stages, if an extended period of bloom is desired.

The following varieties merit a place in every establishment:—

- Attila, white and scarlet, flake.
- Belle Zora, salmon, striped and mottled with crimson.
- Cassandra, bright cherry crimson.
- Gertrude, white and lavender, mottled.
- Incomparable, deep rose, striped with crimson.
- Isis, salmon and white, mottled.
- Jupiter, bright crimson.
- L'Enchanteresse, rose.
- La Sermi, blush white and rose, mottled.
- La Vestale, scarlet.
- Le Zephyr, purple.

Madonna, blush, striped and spotted with crimson.
Nonpariel, blush white.
Proserpine, deep crimson.
Punctata, rose and carmine.
The Baron, white, mottled with rose on the edge.
Tour Pouce, blush rose stripes.
Union, crimson, mottled with white.

DWARF PHLOXES FOR EARLY ORNAMENT IN THE GREENHOUSE OR SITTING-ROOM.

BY ELLEN.

THE hybridising of Phloxes has been most satisfactory in rewarding the necessary care in experiments. What might be the effect of instituting some similar experiments on that dazzling beauty, the annual *Phlox Drummondii*, patience and skill only can determine. To secure permanent and choice varieties of this is very desirable, and a perennial hybrid of such a partial parentage is quite a triumph in that of *P. dependens*. There are some of its natural seedlings of singular beauty in the collections of our florists; while others, probably still more perfect, could be produced through the many curious processes well known to the skilful experimenter.

These humbler Phloxes are, by the way, admirably adapted to parlour and in-door cultivation. A sod of *P. subulata*, var. *nivea*, in a frozen condition, and another similar piece of *P. stolonifera*, were potted in some good light soil towards the end of December last, and kept in a room at the average temperature of 55° Fahr. In about six weeks they began to flower profusely, and formed very pretty objects, requiring no other attention than a plentiful supply of water, and as much light and sun as was convenient. When deprived of the direct influence of the sun, a singular effect was produced; the fine rosy crimson of the blossoms of the latter were changed into a variegated purple hue. This little species, the *stolonifera*, is well known in almost every garden as a desirable spring flower; it is equally capable of gracing with beauty the windows of our sitting-rooms in winter. The snowy blossoms of *nivea* are equally attractive. Doubtless *P. ovata Listoniana* would do equally as well; and *P. divaricata*, with its beautiful light blue flowers, would be very elegant when growing in so early a season of the year. Also the *P. subulata*, and *P. Nuttallii*, a pale flesh colour with red eye, both being very pretty. The *P. prostrata*, too, with lilac flowers, is very neat, and being very early, renders it doubly valuable. Hybrids of these creeping and trailing kinds should be attempted, and the result would amply repay for every attention.

There can be no reason why all these dwarf sorts may not be so cultivated; and were they arranged, for instance, along the front lights of a greenhouse of ordinary temperature, they would furnish a most abundant bloom, to aid in making up bouquets, when flowers are so much needed, and often so scarce. Many of the out-door garden flowers are thus peculiarly fitted to add a grace and an effect to the

more tender and delicate ; but as we see them mingled with hundreds of others, in our flower-beds, we are apt to overlook their particular beauty and individual charms. And though they are the hardy children of northern and colder latitudes, yet they mingle well with the sunny beauties of more favoured climes, losing nothing by the comparison, and lending their happiest aid.

MISCELLANEOUS SECTION.

CANNAS PLANTED IN THE OPEN FLOWER-BED.—Mr. Cox, gardener to William Wells, Esq., of Redleaf, states in the *Gardeners' Magazine* of Botany, that he had a bed of scarlet Geraniums, in a situation that required some other taller plants to break the monotony which Geraniums alone produced, and that he therefore planted out six plants of *Canna gigantea* at two yards apart, through the large bed of Geraniums. The arrangement was much admired, the splendid foliage and bright red and yellow flowers, waving gracefully with every gust of wind, imparted an effect both lively and unique. For the outside of a bed he recommends *C. coccinea*, two feet high ; then *C. patens*, three to four feet ; and in the centre, *C. gigantea*, four to six feet high. Abundance of water is given, and occasionally a soaking of liquid manure. The plants are forwarded early in spring on the stove, then taken to the greenhouse, and the last week in May turned out in the open bed. After blooming, they are taken up, potted, and placed behind the stage in the greenhouse, and kept nearly dry till the end of January, when they are removed into an early vinery.

CINERARIA MARITIMA. SEA RAGWORT.—Most of our readers know, it is often grown in the cottage window. Its neat formed winged leaves, as well as stems, appear as if coated over with frosted silver, and a few of them grouped among a bed of scarlet Geraniums, produces an interesting relief, and has a striking appearance, intermixed with the deep green leaves of Geraniums, and the brilliant scarlet flowers. Last summer there were two beds in a flower-garden filled with Mangle's silver-edged, scarlet-flowered Geranium, intermixed with *Verbena aubletia*, a purple flowering one, and the admixture produced a very pretty effect. There were other beds entirely of this Geranium, but the beauty of the former far exceeded the latter.

PROPAGATING PELARGONIUMS BY BUDS.—By this term we do not mean budding, but putting in single buds or eyes as cuttings. This is a new practice, and is thus performed : 1st, make a shallow pan ready for them, by first putting in a portion of pure loam and sand, then a covering of pure sand alone, give a gentle watering to settle it, and then prepare the buds. Take a shoot of moderate strength, cut off the leaves, but not quite close to the stem, then cut off the two lowest buds, leaving about a quarter of an inch of wood below each bud. After that, split the shoot containing the two buds down the centre. If the two buds are not exactly opposite, but one a little below the other, the upper one must be shortened below the bud to the proper length. The upper cut should be very nearly close to the bud. Make a sufficient number ready at once to fill the pan or

pot. When that is done proceed to plant them, using a short blunt stick a degree thicker than the bud-cutting. Insert them deep enough, so as only to leave the bud just above the sand. Plant them close to, and round the edge of the pan, placing the cut side close against the pot, which will of course place the bud side inwards. Then fill up the holes with a little dry sand, and water gently again. Place them either in a propagating-house, a shady part of a stove near the glass roof, or in a frame placed under the circumstance described at the page referred to above. Shade from bright sunshine in whatever situation they are placed, and water as required. The buds will soon break and show leaves shortly to be followed by a shoot. This will soon require roots to support it, and will send down sap, which will cause, first, a callosity or swelling, and then roots. Now, this method has the advantage over a cutting with leaves, of having a less surface for evaporation, and for damp to take hold of, consequently the bud is not so liable to perish from the juices drying up, or from the moisture acting upon the non-growing leaf, and so causing it to decay before roots are produced. At the same time, we candidly confess that this way of increasing *Pelargoniums* is new, and its success, as our northern neighbours would say, *not proven*, but reasoning from analogy in the well-known successful practice of raising vines from eyes or buds; we judge there is little fear that it will be completely successful, we invite our readers to give it a fair trial, and communicate the result. The buds that have been put in, have, at Pine-apple Place, so far, progressed satisfactorily, not one having, as yet, perished.—*T. Appleby, Cottage Gardener.*

[We have seen this method of propagation with *Pelargoniums* and almost every other of the general class of stove, greenhouse, and half-hardy plants, very extensively practised by a friend of ours during the last three years, and the success is quite astonishing. Some plants that have been considered (almost universally) very difficult of increase were striking root under his treatment, with the greatest freedom, and in a short period. He uses the white sand in almost every instance, and has the pan, or pot, with a liberal drainage.—EDITOR.]

EFFECT OF LIQUID MANURE ON CINERARIAS.—Your leading article on the use of liquid manure, at page 83, has induced me to send you a leaf taken from a *Cineraria* which has been grown to its present size almost entirely by the use of weak liquid manure. I have thirty pots (8-inch) of seedling *Cinerarias*, three plants in a pot, and most of them measure two feet, and some two feet six inches in height, from the top of the pots. The leaf which accompanies this is a fair sample of their lower foliage, and from it you will be able to form some idea of the appearance they present. The soil, or rather I ought to say sand, in which they are grown was taken from the surface of a sandy lane last spring, and was mixed, when used, with about one-third leaf-mould. In the bottoms of the pots, above the drainage, I put some clay and burnt earth, to act as absorbents; and since the plants have been placed in the 8-inch pots, I have watered them constantly with liquid manure collected from the farm-yard, and used at about the rate of one gallon of liquid to twenty gallons of water. They are just now showing flower, and promise to form objects of beauty in the conservatory for

some time to come. I also send a foot-stalk from one of the lower leaves of a plant, upon which I was trying the effects of strong doses of liquid manure, *i.e.*, "half-and-half;" the foot-stalks became shrivelled and blotched, the leaf turned "flabby," as if it had been suffering from want of water, and it eventually died off, from no other cause, apparently, than the use of over-strong liquid manure. To plants grown for the sake of their seeds or fruit, apply liquid manure from the time when they are in flower until the seeds or fruit begin to ripen; and to plants grown for their leaves or roots from the commencement of their growth.—s. m. [The two leaves which accompanied this communication measured seven inches in length, nine inches in breadth, and twenty-six inches in circumference. They were deep green, and in admirable health, with foot-stalks six inches long and three-quarters of an inch round.]—*Gardeners' Chronicle*.

THE POLYANTHUS.—When in bloom, every beholder admires these lovely flowers, and, as Mr. Slater observes in the *Floricultural Review*, the following list will show how little has been done to add to this beautiful flower during the last thirty years.

In 1821, the only Polyanthus shown, that are now known, are—Stead's Telegraph, Fletcher's Defiance (scarce), Yorkshire Regent, Emperor Buonaparte, Crownshaw's Invincible, Turner's Princess, Beauty of Over, Pearson's Alexander, Cox's Regent, Fillingham's Tantarara.

In 1822, the following were added to the list—Eckersley's Jolly Dragoon, Nicholson's Bang Europe.

In 1826, Collier's Princess Royal, Nicholson's Gold Lace.

In 1833, Buck's George the Fourth, Clegg's Lord Crewe, Sir Sidney Smith, Youd's Independence, Maud's Beauty of England, Bullock's Lancer, Faulkner's Black Prince.

In 1840, Hufton's Lord Lincoln, Barrow's Duchess of Sutherland.

In 1844, Nicholson's King, Gibbons' Royal Sovereign, Clegg's Lord John Russell, Saunders' Cheshire Favourite, Hufton's Lord Ranccliffe, Barnard's Formosa.

In 1846, Hall's Premier Peel (not distinct enough from Lord John Russell).

The best in cultivation, as known in this neighbourhood (Manchester), are the following, and we have placed them as they gradually increase in price:—

Buck's George the Fourth.

Bullock's Lancer.

Cox's Regent.

Hufton's Lord Ranccliffe, *alias*
Prince of Orange and Golden
Hero.

Fillingham's Tantarara.

Nicholson's Gold Lace.

Nicholson's King.

Pearson's Alexander.

Stead's Telegraph.

Brown's Free Bloomer

Clegg's Lord Crewe, *alias* George
Canning.

Collier's Princess Royal.

Saunders' Cheshire Favourite.

Crownshaw's Eclipse.

Crownshaw's Exile.

Crownshaw's Invincible.

Hufton's Earl Grey, *alias* Lord
John Russell.

Maud's Beauty of England.

Nicholson's Bang Europe.

Hufton's Earl Lincoln.

Addis' Kingfisher.

The following AURICULAS obtained the first, second, and third prizes at the aggregate of shows during 1851. They may be depended upon as being of first-rate excellence:—

Green-edged Class.—Page's Champion, Oliver's Lovely Ann, Ashton's Prince of Wales, Lee's Colonel Taylor, Pollitt's Standard of England, Lightbody's Star of Bethlehem, Hudson's Apollo, Booth's Freedom, Litton's Emperor, Ollier's Lady Ann Wilbraham, Yates' Morris Green Hero, and Pollitt's Highland Laddie.

Grey-edged.—Sykes' Complete, Oliver's Lovely Ann (shows also in green-edged), Waterhouse's Conqueror of Europe, Fletcher's Ne Plus Ultra, Fletcher's Mary Ann, Barlow's Morning Star, Beauty of Wydham, Wood's Lord Lascelles, Cheetham's Lancashire Hero, Kenyon's Ringleader, and Grimes' Privateer.

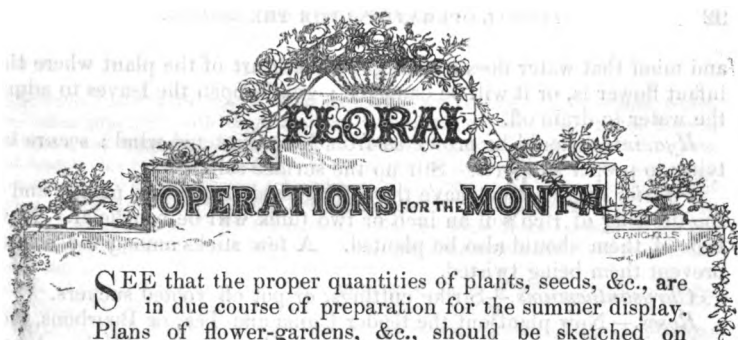
White-edged.—Taylor's Favourite, Lee's Venus, Popplewell's Conqueror, Cheetham's Countess of Wilton, Ashworth's Regular, Lord of Hallamshire, Catharina, Ashworth's Rule All, and Hepworth's True Briton.

Selfs.—Netherwood's Othello, Berry's Lord Lee, Redmayne's Metropolitan, Clegg's Blue Bonnet, Spalding's Metropolitan, Smith's Mrs. Smith, Hufton's Squire Mundy, Barker's Nonsuch, and Whittaker's True Blue.

EVILS OF INDISCRIMINATELY WATERING PLANTS IN POTS IMMEDIATELY AFTER BEING SHIFTED.—To insert cuttings of plants, particularly those of a soft, woody, or succulent nature, into moist materials, before the wounds made in preparing them are healed over, is often attended with fatal consequences, from the moisture finding its way into the pores of the plant, thereby causing putrefaction and decay. The woody parts of plants being more consolidated and less porous than their roots, are altogether less calculated to imbibe an undue portion of moisture, yet we find that even these do so to a most injurious extent; therefore, we may reasonably conclude that roots mutilated and placed in the same circumstances would have a greater chance, from their peculiar organization, to suffer from such a cause; nor can there remain a doubt that they do so. This points out as most injudicious, the practice of turning plants out of their pots reducing their balls, as the case may be, thereby lacerating every fibre, and placing every rootlet in a worse position than a cutting, and then finishing the operation by giving a good drenching of water, which, as we have already seen, must make direct havoc among the previously reduced channels by which the plant receives its food. Such is, in a great measure, the cause of delicate plants suffering so much from shifting, of the check they receive, unless the operation be carefully performed, and consequent loss of time in recovering from its effects. Still this is an every-day practice, that has descended to us hallowed by the custom of ages, and sanctioned by the highest authorities. Who ever heard of directions for shifting or potting plants, that did not end thus: Give the whole a good watering, to settle the mould in the pots, and the operation is completed? After shifting or transplanting plants in hot weather, when a dry atmosphere causes, by excessive evaporation, an unusual drain upon the roots, the necessity of a supply will soon become apparent; and administering it under such circumstances is less injurious than

under any other, from the activity maintained in every part of the plant, rendering stagnation an unlikely occurrence. But even then, when practicable, it is better to confine them in a close moist atmosphere, which, with water overhead and shade, will enable them to exist through the medium of the leaves until growing has commenced, and the roots are in a condition to receive, without injury, the necessary supply. It is, however, when there is a deficiency of heat, vegetation languid, and a corresponding danger from excess of moisture, that such precaution is most required, and the contrary practice most hurtful. Among seedlings of tender sorts, the mortality from such maltreatment is truly great; and when the impossibility of transplanting such without, in some shape, hurting their few and almost unformed spongioles, scarcely more consolidated than the fluid in which they are thoughtlessly immersed, is considered, their certain destruction is not to be wondered at. The advantages these derive from the treatment described, led me first to examine more closely what I deem a matter of much importance. Before quitting the subject I may add, that the injury inflicted by such treatment is not confined to plants alone; the soil, also, is oftentimes irreparably injured. It has been placed between the sides of the pot and the root-bound ball containing the plant, where, being in a comparatively loose state, it receives the whole of the water that is considered sufficient to moisten the whole mass; as, where there is so little resistance, it is as effectually repelled by the hard, and much more by a dry, ball as by the sides of the pot. This reduces what has been added to the condition of a puddle, and in this state it stands a good chance of being baked as hard as a brick. At all events, it has been totally unfitted to afford that nourishment to the plant it otherwise would have done. Such consequences may be avoided by applying moisture gradually; but if some time is allowed to elapse, there is not so much to fear, even from the usual soaking, as the old and new material must, in the interim, have become equally dry; a state, let it be remembered, indispensable to the thorough incorporation of such materials.—*Hovey's Magazine of Horticulture.*

CANTUA BICOLOR.—Having heard this plant complained of as being a shy bloomer, even so much so as to render it unworthy of cultivation, I beg to inform your readers that I have now a specimen of it in *great beauty*, which has been treated in the following manner. In the spring of 1850, I struck a small cutting of it, and continued growing it in the most rapid manner I could in a moist stove until the autumn of the same year, when it was gradually hardened and kept in a cold greenhouse through the winter. In spring I shifted it into an 8-inch pot, placed it in a vinery where there was bottom heat (the house being warmed by Polmaise improved), in which it grew rapidly until Midsummer. I then gradually inured it to the open air; water was withheld early in autumn, and it was placed on a north border until October, after which it was put in a cold house. In the second week in January it was placed again in the vinery, and it is now covered with flowers in every stage of development, forming a beautiful object in the conservatory. The soil which I use for it is equal parts peat, leaf-mould, and loam, with liberal drainage.—*R. Pettit, Gardener to Sir H. E. Bunbury, Bart., Barton Hall, near Bury St. Edmunds.* (*Gardeners' Chronicle.*)



SEE that the proper quantities of plants, seeds, &c., are in due course of preparation for the summer display. Plans of flower-gardens, &c., should be sketched on paper, and the appropriate regulations for future arrangement and plants required be put down; this attention is of much assistance.

IN THE FLOWER-GARDEN.—Last month was the best time for grafting shrubs, as Thorns, Limes, &c., but late-growing kinds may still be done, as Rhododendrons, &c.

Annuals, hardy, such as Clarkia, Nemophila, Larkspur, &c., may still be sown in the open bed. Seeds of *Biennials*, too, should now be sown in beds, such as Hollyhocks, Sweet Williams, Scabious, Canterbury Bells, &c. Also seeds of *Perennials*, as Phloxes, Campanulas, &c. Finish planting out Biennials and Perennials, and dividing large patches of border plants. Hollyhocks must be put in immediately; water them as soon as planted. Newly-budded trees, that is those budded last season, should be looked over, and if any portion of the stock be pushing shoots, they must be rubbed off, so that the entire strength should go to the new shoot engrafted.

Auriculas and Polyanthuses.—Give air freely on all suitable occasions, to prevent the flower-stems being drawn up weakly. The blossoms will soon be opening; no water must be allowed to fall upon them, and they must be shaded from hot sun.

Pinks.—If beds of them are required, make them immediately. A loamy soil, made of turfs a few inches thick, and well rotted, with an equal portion of old decayed cow-dung, is admirably adapted for their growth. It should be nine inches deep, and have a good drainage below. The plants must be removed with as much of the ball of soil as possible, and be planted six inches apart. High-raised beds are not beneficial, except in low, wet situations. Autumn-planted beds should be top-dressed with a little rich soil, and the plants be made firm in their places; a few small sticks stuck around amongst the shoots will prevent twisting off.

Ranunculuses and Anemones.—When the plants are risen an inch or two high, have the soil pressed closely around them with the hands, stopping up any holes made by worms, &c. A top-dressing, too, of rich compost, free from wire-worm, is very beneficial. Often stir up the soil between the rows. Showers of rain are very beneficial for their growth; if none fall, water with *soft* water in the morning: well-water is injurious. Weak manure-water occasionally poured between the plants contributes to vigour.

Tulips.—Stir the surface of the bed an inch deep. Protect from hail, frost, and strong wind. Keep the soil firm around the stem,

and mind that water does not lodge in the heart of the plant where the infant flower is, or it will be damaged ; gently open the leaves to admit the water to drain off.

Hyacinths should be protected from frost, sun, and wind ; secure by tying to proper supports. Stir up the surface soil.

Pansies in beds must have the soil pressed around the plants, and a top-dressing of rich soil an inch or two thick will be beneficial. New beds of them should also be planted. A few sticks among the shoots prevent them being twisted.

Chrysanthemums.—Strike cuttings, or pot off rooted suckers.

Roses.—Now plant out the tender China and Tea, or Bourbons, &c.

IN THE FORCING-FRAME.—Balsams, Cockscombs, Globe Amarynthuses, &c., that require potting off, or repotting, should be duly attended to ; also Thunbergias, Browallias, Lobelias, Brachycoma, &c. Seedling Fuchsias, Verbenas, Petunias, &c., should be potted off singly. Dahlias, too, should be placed so as not to be drawn up weakly. Achimenes must be potted off singly. (See articles on Culture in previous Numbers.) Tender Annuals, as Stocks, Zinnias, &c., should be placed in a cool frame or pit, to prevent them being drawn up weakly. Where it is practicable to prick out, such as Stocks, Asters, &c., upon beds, and protect with frames, it should be done ; it gives a robust growth to them. Cuttings of most greenhouse plants may now be put off. Young plants of Fuchsias, now procured, if six inches high, will make fine ones for shows in summer.

IN THE GREENHOUSE.—Admit all the air possible. Repot Lobelias, Tigridias, Geraniums, Verbenas, and other similar plants for beds. All other kinds of plants requiring repotting should now be done. Such as are straggling, &c., should be cut in, to render them bushy. *Pelargoniums* will require particular attention in tying up, watering, and fumigating (if green fly be perceived) ; occasionally give a little manure-water. (See articles on Culture in previous volume.) Camellias, when done blooming, examine the roots, and, if necessary, repot (see articles upon, for soil, &c.) ; then place them in a warm part of the greenhouse or forcing-house, giving due attention to watering, &c., till the wood is firm and flower-buds are set ; they may then be removed to a cool pit, so as to be gradually hardened by more air, &c. Japan Lilies flourish best in peat soil and sand, Cinerarias require particular attention ; pot or repot young seedlings, and fumigate if green fly appear.

A careful inspection of the greenhouse plants should be made, to see which require repotting, and do it at once, not waiting till some general performance. Such Azaleas as have done blooming must directly be repotted, and their growth afresh be gently promoted in a higher temperature for a short time.

Ericas.—Any requiring repotting should be done directly ; avoid too large pots with the less vigorous growers, but free growers will require room to extend in proportion. Give air freely, but avoid draughts, especially from east and north. Calceolarias require repotting to have a vigorous bloom.

BRIEF REMARKS.

SHOWING PANSIES IN POTS.—Two years ago we noticed the deceptions which were often practised with these flowers, when flattened, previously to the hour of exhibition, and suggested the propriety of plants being grown and exhibited in pots. Last season this mode was adopted at some of the London exhibitions, and much approved of. We observe the schedules of the forthcoming season abide by this system. The following varieties are recommended in the *Florist*, "being strong growers," as most suitable for the purpose. Potting them, from January to the end of February, in good decomposed turfy loam, rotten manure, a little leaf-mould, and coarse sand.

Sells of various Shades.—Blanche, Constantine, Duke of Perth, Ibrahim Pasha, Lucy Neal, Ophir, Polyphemus, Pompey, Rainbow, Sambo.

Varieties with White Grounds.—Aurora, Almanzor, Caroline, Climax, Madame Sontag, Miss Thomson, Mrs. Beck, Mrs. Hamilton, Penelope, Sir R. Peel, Royal Visit.

Varieties with different Shades of Yellow Ground.—Addison, Constellation, Duke of Norfolk, Diadem, Elegant, Euphemia, France Cycole, Iron Duke, Juventa, Mr. Beck, Masterpiece, Ophelia, Robert Burns, Sir Philip Sydney, Supreme, Zabdi.

MIGNONETTE IN POTS. (*Inquirer*).—The finest grown we ever saw is what is brought to the London markets. The seed is sown in 32 or 48-sized pots, in August or September. When the plants are up strong enough, they are thinned so as to leave from four to six in each pot; these are preserved through winter in shallow frames, plunged to the rim, and kept near the glass. All the air is given that can be, so that they are kept free from frost. During winter care is taken not to give too much water. The plants bloom in the same pots the seeds were sown in. To have it in vigorous bloom in autumn, seed must be sown in February, and the plants treated as above, in thinning, &c. Pots of August-sown Mignonette are often turned out with entire balls into boxes, for windows, &c.

SUPPORT FOR CARNATIONS, &c.—In your last volume, a correspondent remarks that he used wire props for this purpose. I have had in use for several years the following support. It consists of a centre rod of the strongest wire, nearly a quarter of an inch diameter. It is three feet long from its top to the surface of the soil in the pot. It does not enter into the soil near the plant, but over the surface of the soil two side rods, welded to the centre rod, diverge right and left to the rim of the pot, and each is bent, so that they are pushed down the inside of the pot, one on each side, and so long as to reach to the bottom. These steady the support firmly in its place, and do not injure the roots of the plant, as is often the case when they are thrust down near the plant. Holes are stamped (every few inches apart) in the rod, through which small copper wire or worsted is drawn, to tie round the shoots, &c., and secure them to the principal. I have them painted green every year, and, whilst they have a neat appearance, they are of permanent durability. The cost is about three-halfpence each. The blacksmith makes the holes in the rod, and charges a-halfpenny each rod.

CULTURE OF CAMELLIAS.—I shall be obliged by some reader giving particular instructions as to the successful treatment of this noble tribe of flowers.—H. D.

ON HEPATICAS.—My garden is well situated in one of the midland counties. Among other spring flowers, I have the single and double pink Hepatica, single and double blue, and single white. All do well, except the double blue, which does not thrive well, the plants being little larger than when I purchased them, three years ago; and the flowers are very small. Does this sort require any particular treatment? I shall be glad of information, by some reader, as to this matter. I have been told a *double white* exists; where can it be had? Is there any other than what I have mentioned above?—*Inquirer*. [We have been informed that the double-flowered Wood Anemone has been sent out by some as being a double white Hepatica.—EDITOR.]

PROPAGATING FANCY PELARGONIUMS.—The general large-flowered Pelargoniums, as those of Messrs. Foster, Becks, and others, are usually increased by cuttings put in when the old plants are cut down in July and August. They root well, and get properly established before winter. The fancy class, in general, are of weaker habit, do not progress so quickly, and do not succeed well, if struck at so late a period as the other class; therefore cuttings must be put off from the beginning of February to

the end of March, before the shoots on the last year's plants begin to push; the wood is not liable to rot, soon strikes root, and, being early potted off, they have several months to grow in, become bushy and well ripened, to stand through winter, and the second season make fine blooming specimens.—*A London Practitioner.*

CAPE GERANIUMS.—These are arranged into two sections, viz., the *bulbous* and the *shrubby*. The former comprises *ardens*, *bicolor*, *discolor*, *triste*, *flavum*, and others; the latter, *echinatum*, *quinque vulnere*, *flexuosum*, *fulgidum*, and many others. Some beautiful kinds have been exhibited in collections during the last three or four years, at Chiswick and other London shows. During the last two seasons attempts have been made to cross these and the fancy class, with a view to obtain a larger race of flowers. These Cape sections have been tried out in the open beds, in warm situations, and they succeeded admirably, especially the shrubby class. We saw some small beds of them last season—a bed of a sort—dwarf, bushy plants, which were exceedingly beautiful. Once had, they increase rapidly, and a stock is easily kept.

HORTUS SICCUS.—In studying Botany, it is of advantage to prepare a book of dried specimens of plants; such a book is termed *Hortus Siccus*, a dry garden. Choose from a plant a specimen having flower, bud, leaf, and, if possible, seed. Lay it upon thick blossom blotting-paper, placing one or two sheets of the same over it; upon which, unless the specimen be very succulent and thick, lay another specimen, and then more paper. Care must be taken to lay each part of the specimen smooth and flat upon the paper; no part of the specimen should be under another part; cut off any portion that is inconvenient to retain; if any bud or flower be too thick, pare off some of the under side to make them lie properly. When they are arranged, put a heavy weight upon them,—after a few hours, carefully shift the position of each specimen to a dry part of the paper, and replace the weight; repeat this, changing the paper, if necessary, until the specimens be perfectly dry. Prepare a solution of gum with a little camphor in it, and secure each specimen to a page in a folio of cartridge or whity-brown paper; then write under each the name of the plant, class, order, tree, shrub, herb, country, &c. In the case of any specimen being very full of sap, a hot iron may be passed two or three times over the covering of paper—taking care not to burn it. Now is the season to begin.—*Flora.*

ON THE TREE MIGNONETTE.—Last year I treated some plants of *Mignonette*, in order to make them shrubby, as follows:—The plants were two feet high, and produced a large head of blossoms. I am sure it is well worth the attention it requires. In a 48-sized pot I potted one good plant, in a very rich loamy soil. In five weeks afterwards I removed the plant, ball entire, into a 36-sized pot, using the same kind of soil. As the plant pushed forth, I pinched off all side shoots, allowing the leaf to remain from which the shoot pushed. The plant showed bloom when about ten inches high; I pinched it off, and it caused the top lateral shoot to push upwards for a leader, which I trained for the purpose. On reaching two feet high, I cut off the blossom, and encouraged about eight of the best shoots for blooming. They flowered profusely last autumn, and now are real pictures of beauty and fragrance, and I expect will continue so through the season. I potted off one-half of my plants early in May, 1850, and the other early in June. At the end of April, 1851, I repotted the plants into 24s, keeping the ball entire. I placed the plants at first in a melon frame, and when six inches high, took them into the greenhouse where I have kept them till now.—*Clericus.*

TROPEOLUM LOBBIANUM.—There is a plant of it in the gardens of the Duke of Cleveland, at Raby Castle, near Durham, trained to a trellis against a back wall, which covers a space of thirty feet long by twelve feet high, and has been in bloom ever since last November, producing tens of thousands of its bright orange-scarlet flowers. It has been, and still is, a perfect gem, growing very vigorously, and there are thousands of blossoms yet to come out. The plant is grown in a border, in strong hazel loam, mushroom bed dung, and charcoal well incorporated together, and turned in a rough state. It has occasional waterings of liquid manure, a quart of that to a gallon of water is about the proportion given. It is a fine plant for trellis, pillar, or if grown in pots for training round any framework. It grows very freely, and cuttings strike root very readily. It is a charming plant, too, for the flower-garden, either supported erect, or prostrate over a raised bed.

DESTRUCTION OF GREEN-FLY INSECT.—Mr. Ayres, of Brooklands, Blackheath, near London, states that he has succeeded to satisfaction in fumigating his plant-

houses as follows:—A short time back, having no tobacco-paper, and not liking to give 4s. 6d. per pound for tobacco, I made an experiment of a small quantity of tobacco and Cayenne combined, and am delighted with the result. Choosing a damp still night, about two quarts of glowing fire was placed upon a wire sieve, and that was elevated upon three bricks in the pathway of the centre house, (three being smoked at the same time) to increase the draught. Over the fire some nitre-paper, torn into small pieces, was placed, then a handful of damp stable litter, and then the tobacco, which had been damped and thoroughly impregnated with the pepper. The quantity used was 6 ozs. of tobacco, and 2 ozs. of Cayenne, the expense being about 3s.; and the houses were ninety feet long, sixteen feet wide, and tolerably lofty. One hour after the fire was out, not a living insect could be found; and I am quite sure the tobacco and Cayenne did fully as much execution as when we used 7 lbs. of tobacco-paper, at an expense of 10s. 6d. The Cayenne was a common kind, which I purchased at 8d. per ounce; but no doubt common Chillies would be better than adulterated pepper, and these I intend to grow for my own use this season. Thus you see “fumigators” are rendered useless; a very small quantity of tobacco with Cayenne is sufficient, and what is still better, the horrible stench of strong tobacco or tobacco-paper is got rid of; for with the small quantity used, the smell is driven quite off in twenty-four hours. Let me, however, caution the reader that the tobacco and Cayenne, in addition to destroying insects, are an excellent recipe to “catch a good cold;”—for myself, my foreman, and an assistant, had each to pay that penalty for our knowledge. It is, however, quite unnecessary to enter the house if the fire is properly lighted at the first start, and the paper, litter, and tobacco are damped at the time they are put on. If the sieve is placed near the door, then by opening it a little the draught is increased, and the necessity for entering entirely obviated.” (The same kind of materials consumed in the Fumigator, and applied through that medium, of course will produce similar effects, and it is very probable a much less quantity of material would be required by using the Fumigator.)—A. Z.

STOVE CLIMBERS.—I shall be obliged by having a list of some of the best of these plants, amongst which I desire a few of the *Passifloras* may be included.—F. C. J.

Stephanotus floribunda, white.
Allamanda Schottii, deep yellow.
Bignonia venusta, fine buff.
Hoya carnosa, flesh colour.
 ——— *campanulata*, sulphur.
Ipomœa Learii, blue and red.
 ——— *Horsfallii*, rosy-crimson.
 ——— *tyrianthina*, purple.
Gardenia Sherbournii, white, dark centre.
Dipladenia crassinoda, blush.
Mandevillea suaveolens, white.

Combretum grandiflorum, scarlet.
Tacsonia manicata, bright scarlet.
 ——— *splendens*, rose.
Bougainvillea spectabilis, pink.
Passiflora alata, red, blue, and green.
 ——— *edulis*, lilac and blue.
 ——— *elegans*, scarlet and blue.
 ——— *kermesina*, crimson.
 ——— *racemosa elegans*, scarlet.
 ——— *Londonii*, red and purple.
 ——— *quadrangulans*, green and blue.

The above are free growers, and will extend any moderate length. There are others of a dwarfer growth, equally pretty.

ON DESTROYING SLUGS, &c.—The best means “An Old Carnation Grower” can use to destroy slugs, &c., is to dissolve two drachms of corrosive sublimate (poison) in two gallons of boiling water, and water his plants with this solution; it will also be necessary for him to take every pot out of the frame, and pour in the hole at the bottom a small quantity of the solution, as this is where they generally secrete themselves. He need not be afraid to use this, as it is perfectly innocuous to the plants; indeed, I always fancy it does them good, as it improves their verdure. This solution will also cause worms to rise out of the ground, if poured upon any bed at the close of daylight, when they may be gathered up and destroyed. I will now correct an error in my Article on the Carnation; the pots used should be four to the cast, instead of sixteen, as there stated.—*A Florist*.

ON THE CULTIVATION OF *ALSTROEMERIAS*.—I should be much obliged if some correspondent who cultivates the *Alstroemeria* successfully, would furnish me with a few particulars of management; I cannot get them to bloom well either in pots or the open border. An early attention will much oblige—*Maria*.

LIST OF SHOWY BORDER FLOWERS, &c.—I and several friends, having small

gardens entirely devoted to flowers, are much in want of a list of showy herbaceous plants; there are annually numbers of these plants for sale at the various seedsmen in town, but we have no knowledge of their character whether showy or not; and if any of your correspondents would favour us with a list of the names, height, colour, and month for blooming, it would be rendering us a great service.—*A Collector of Herbaceous Plants.*

VIGOROUS FUCHSIAS.—I have been an ardent admirer, cultivator, and exhibitor of the Fuchsia for near twenty years, consequently in this particular I am a practical Fuchsia grower. The largest flowers of any kind, I have uniformly had upon plants of from one to four years old. A cutting struck early in spring, duly attended to, will that year make a vigorous blooming plant from two to four feet high. At the close of the blooming season, the plants are placed behind the plant stage, kept *nearly dry* till February. I then shake off the soil from the roots, and cut off all the side branches to one or two buds, leaving only the main stem thus denuded, taking off several inches of its top. The plant is repotted in equal portions of loam, well-decomposed manure, and turfy peat, with a sprinkling of bits of crushed bone and charcoal. I have a low double-roofed forcing-house with a bark bed in the middle. About ten days after being potted I plunge them in this bed, of gentle heat, and they soon push vigorously. When the new shoots have pushed two or three inches long, I thin all away except sufficient to form the plant properly, and such shoots I have them distant, in proportion to the proportionate size I am desirous to have the flowers. I keep the plants in the bark-pit till the appearance of blooming buds upon the new shoots. The flowers which such shoots, thus proceeding immediately from the main stem, produce, are surprisingly larger than those plants produce under the general mode of treatment which is pursued.

The same plants are bloomed, shoots cut close in, repotted, and moist bottom heat given, "which is very essential," for three successive years; then being provided with year old plants, I put away the former, and proceed with the culture of the younger ones. Plants so treated make beautiful specimens, each year becoming a little higher. Manure-water is given once a-week during the growing and blooming period. Some kinds of Fuchsias will push shoots from the old upright stem when the previous year's ones are cut *clean away*. When such do push, I retain them in preference to those which proceed from the short part of the last year's side-shoot, having the former I rub off the latter. The softer wooded kinds push most freely from the *main* stem, and many of such habit I have cut the previous year's side-shoots wholly off. No Fuchsia grower need fear to prune thus severely. The delicate wiry-wooded ones do not so certainly push from the main stem after the plant is two years old.—*A Middlesex Man.*

ON ANSWERING QUERIES, &c.—I venture to assert, in the name of the greater half of your readers, that if you could induce your contributors to answer queries, or would shortly answer all arrears every three months yourself, it would render your publication still more valuable to unscientific subscribers, who, without putting questions themselves, would be great gainers from the doubts and suggestions of others. You must understand this remark is applied to questions which refer strictly to the cultivation of plants, for you cannot be expected to furnish your readers with taste as well as knowledge; or to fix upon the prettiest flowers for those who cannot choose for themselves.—*A Constant Reader.* (We hope our friend's hint will have the attention of our readers. We will do our part.—CONDUCTOR.)

PRUNING CAMELLIAS. WILL THEY BEAR IT? WHEN IS THE BEST TIME?—To the first I reply, few plants bear it better. To the second, as soon as they have done flowering. Large unwieldy plants may thus be reduced, and kept in pots if desired. If in good condition, they may be cut in to the old wood with impunity, especially if not more than from two to four years old; but then they must be kept in a close, moist atmosphere, and a temperature as near 60° as 50°. I have broken old stems very successfully in a dung heat. Those who recollect the hospital described for sickly oranges will not be far from the mark. A shady place in a forcing-house is a good substitute, especially if some moss is kept moist round the stems. The plants must break freely before they are either shifted or planted out. If the latter is done, a little pruning will only be wanted occasionally, if the compost is not too rich.—*R. Fish.*—(*Cottage Gardener.*)

Univ. of
California



Eschinanthus splendidus.



ÆSCHYNANTHUS SPLENDIDUS.

"COME, Cynthia, come! in town no longer stay;
From crowds, and noise, and folly, haste away;
The fields, the meads, the trees are full in bloom,
The vernal showers awake a rich perfume."

"Ye field flowers! the gardens eclipse you, 'tis true,
Yet, wildings of nature, I dote upon you,
For ye waft me to summers of old;
When the earth teem'd around me with fairy delight,
And when daisies and buttercups gladdened my sight,
Like treasures of silver and gold."

A DRAWING of this most beautiful flower was sent us by Messrs. Lucombe, Pince, and Co., Nurserymen, of Exeter. Many of our readers are aware that, during the last ten years, some very handsome species have been introduced into this country, and are highly ornamental in the stove collection of plants. The one we now figure proves to be a valuable acquisition to the greenhouse, or even pit-frame; and in consequence, all who possess these latter-named structures may successfully cultivate this most charming, showy, blooming plant. It is an hybrid, raised by the above-named nurserymen, who handed us the following particulars, which were extracted from the *Magazine of Botany*, December Number, 1851.

"A hybrid production, and a very beautiful one, raised by Messrs. Lucombe, Pince, and Co., of Exeter, to whom we are indebted for the specimens from which our drawing was made. It was raised, as we are informed, from *Æ. speciosus*, impregnated by *Æ. grandiflorus*, and possesses the abundant flowering habit and erect growth of the former, and in brilliance of colour and marking even exceeding the latter. It is, no doubt, the finest of its race, which, as is well known, now con-

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tains many very splendid imported species. We are informed by Mr. Pince that his specimen plant of this hybrid had a bunch of flowers upon every shoot; each of the bunches in the specimens sent us numbering upwards of a score of blossoms. This plant had been grown all the summer in a cold pit, without any artificial heat whatever. No doubt, it will prove a most useful ornamental plant, of very easy culture, and the brilliance of its large clusters of flowers will make it conspicuous, even among the most showy plants. The flowers were communicated to us early in October last."

This tribe of plants flourishes in a compost which consists of a considerable part of vegetable matter, and having a free drainage. The compost must be broken, and kept in a rough state. Some of the kinds are of a drooping habit, and are grown in suspended baskets or pots, and the branches hang over the sides. The one we now figure is an erect, stiff-growing, shrubby plant; and, blooming so freely, renders it one of the most beautiful and ornamental plants, and deserving a place in every collection. It strikes readily by cuttings inserted in sand and rotten leaf-mould, placed where there is bottom heat. Messrs. Lucombe, Pince, and Co., deserve to be amply repaid for the production of such a brilliant blooming plant. When the plants have ceased blooming they require a season of rest, after which they should be repotted and started into growth again. Having several plants, and doing this at various successive times, some may always be had in bloom throughout the year.

"Where'er I cast my wondering eyes around,
The God I seek, in every object's found;
Pursuing Thee, the verdant fields I pass,
And read Thy name in every blade of grass;
Beauty complete, and majesty divine,
In all Thy works, adored Creator, shine."

NOTES ON NEW OR RARE PLANTS.

ABELIA UNIFLORA.—An evergreen, smallish, erect-growing shrub, from the North of China. The flowers are produced singly, funnel-shaped, white, with a deep violet tinge on the upper side. In Messrs. Standish and Noble's nursery, Bagshot.

ACACIA UNDULIFOLIA. Leguminosæ.—This species was introduced in 1824, and has been cultivated in the collection of Messrs. Henderson, Pine-Apple Place, under the name of *olcafolia*. It is a pretty shrub, about four feet high. The flowers are in round heads, of a bright yellow, and freely produced. (Figured in *Garden Companion*.)

BEGONIA STRIGILOSA. BRISTLY.—From Central America. It has a creeping stem. The flower-stalks rise a foot high, and the blossoms are in large corymbs, a bright red colour. A very pretty plant for the stove, or warm conservatory.

BENTHAMIA FRAGIFERA. Cornææ.—A Plate of the fruit of this fine tree was given by us fifteen years ago, and fine trees of it are now growing in the south of England, which flower and fruit in abundance. It is most esteemed for its beautiful fruit, which are in branching clusters; each fruit being nearly the size of a nectarine, and of a deep orange red. It is a showy tree, and merits more extensive cultivation. (Figured in *Bot. Mag.*, 4641.)

BESCHOMERIA TUBIFLORA. Amaryllidææ.—A plant introduced from Mexico to the Royal Gardens at Kew. It produces an erect flower-stem, of about four feet in height, each flower-tube two inches long, green, with reddish-purple streak. (Figured in *Bot. Mag.*, 4642.)

BILBERGIA MORELIANA. Bromeliaceæ.—A new species, somewhat like *B. zebina*, but the bracts and flowers are higher coloured. It was introduced from Brazil, and has been cultivated by M. Morel, of Paris. It is certainly one of the prettiest of the tribe. (Figured in *Paxton's Flower Garden*.)

CALLIXENE POLYPHYLLA.—This plant is of the Lilywort tribe. It is the *Luzuriaga erecta* of Kunth, very similar to the *L. radicans*, but the flowers are white, speckled with brown. Messrs. Veitch's received them from Mr. Lobb, who thinks they will succeed in England on elevated parts of the mainland.

CANNA SANGUINEA. Marantaceæ.—A new species of *Canna*, introduced by M. Warczewicz from Costa Rica in 1850. It grows about three feet high; flowers of a deep crimson red. It is easy of cultivation, and flowers well in the open border during the summer months. In the autumn it should be potted, and placed in the greenhouse till spring. (*Paxton's Flower Garden*.)

CHEIROSTEMON PLATANOIDES.—A greenhouse tree, which was observed in Mexico when that country was discovered. The natives made a kind of pilgrimage to it, and collected the flowers for amulets. Hartweg found it a few years ago on the mountains of Acatepango, forming trees from fifty to eighty feet high. There is a plant of it blossoms in one of the great conservatories in Paris which is thirty feet high. The leaves are very like those of the Plane-tree. The flowers are bell-shaped, drooping, each being near two inches long, of a purplish-brown colour. (*Flores des Serres*.)

CATALPA POTTSII. A native of Mexico. A bush, growing from four to six feet high. Leaves leathery, lance-shaped. The flowers are of a Bignonia-like form, pink, two inches long. It is a half-hardy shrub, introduced to the Royal Gardens of Kew.

CYMBIDIUM MASTERSII.—Messrs. Loddiges obtained this stove orchid from the East Indies, and named it after Mr. Masters, assistant in the Calcutta Botanic Garden. Petals and sepals narrow, white tinged with yellow; lip white, stained with rose. Each flower is about four inches across. (Figured in *Paxton's Flower Garden*, No. 78.)

DENDROBIUM AQUEUM. THE WATERY. Orchideæ.—From the East Indies. It has bloomed in the stove in the Royal Gardens of Kew. It is a robust plant. The flowers are produced along the erect stems from the axils of the leaves, two or three together at each. The flower is two inches across, of a creamy white, with a yellow spot at the bottom of the lip. (Figured in *Bot. Mag.*, 4640.)

GASTROLOBIMUM CUNEATUM. PEA-FLOWERED. Leguminosæ.—Mr. Drummond discovered this pretty shrub in Australia, and it is cultivated in the nursery of Messrs. Henderson, of Pine-Apple Place. It is a dwarf branching shrub, with narrow leaves about an inch long. Flowers (pea-formed) of a rich yellow, with a deep crimson keel. It merits a place in every greenhouse. (Figured in *Magazine of Botany*.)

GESNERA PURPUREA.—We do not know from whence this very handsome plant was introduced into this country, nor the period when. It is in habit much like *G. Douglassii*, and in consequence, it has been supposed to be an hybrid production between *G. Douglassii* and *G. discolor*. It is, however, one of the most striking of this noble tribe of plants, and is far handsomer than either of the two just named. The flowers are produced in large panicles, numerous, and each blossom two inches long, of a rich deep-rose colour, beautifully spotted with crimson. Plants may now be obtained at some of the nursery establishments, and it merits a place in every collection of hot-house plants. (Figured in *Paxton's Flower Garden*, No. 76.)

HAKEA MYRTOIDES. MYRTLE-LIKE. Proteacæa.—A shrubby plant, growing two feet high, from the Swan River settlement. The leaves are very similar to those of the *Acacia armata*. The bright red and yellow flowers (so unusual in this genus), nestled among the pretty leaves, produce a very pretty effect. Each flower is about half an inch long. It blooms in winter in the greenhouse, and merits a place in every one. (Figured in *Bot. Mag.*, 4643.)

LINARIA RETICULATA. (Synonym, *Antirrhinum reticulatum*.)—This very pretty-flowering Toad-flax is a hardy herbaceous perennial plant, a native of Portugal and Algeria. It blooms very freely during summer, and readily increases by cuttings. The flowers are very handsome, variable in colour, from blue, rose, and purple-veined, to deep purple; the inside of the throat whitish, sometimes yellow. Each blossom is an inch long. Mr. Stark, of Edinburgh, possesses the plant. (Figured in *Magazine of Botany*.)

LUZURIAGA RADICANS. Liliacæa.—A native of South Chili, where it grows in cool shady woods, covering the trunks of trees, and bears pendulous blossoms, white, something like snowdrops, and which are very fragrant.

MACHERANTHERA TANACETIFOLIA. TANSY-LEAVED. (Synonym, *Aster tanacetifolia*, *A. chrysanthemoides*.)—Introduced to the Royal Gardens of Kew from New Mexico. It is a handsome, half-hardy, half-shrubby plant. It grows about a foot high, branching, and the flowers are nearly as those of the China Aster. They are produced in

terminal heads, yellow, with a purple ray. It flourishes in the open ground in summer, but requires to be in the greenhouse or pit-frame in winter. It increases freely by cuttings.

SISYRINCHIUM MAJALE. (Synonym, *S. graminifolium*, var. *pumilum*.)—A dwarf, half-hardy perennial from Chili, with rough grassy leaves, growing from six to eighteen inches high. Sepals and petals bright yellow, with a deep brown spot at the base of each. Each flower is nearly an inch across, very pretty, and blooming in terminal heads in succession, for a long time, renders it valuable.

STROBILANTHUS AURICULATUS. Acanthaceæ.—A native of the East Indies, and is a fine winter, and early spring blooming, hot-house, soft-wooded plant. It grows two to three feet high, branching. The flowers are produced numerous, on short axillary branches, each having from ten to twenty blossoms. They are bell-shaped, nearly an inch long, pale blue, prettily veined. It is of the same habit as the *Ruellia*. The genus *Strobilanthus* was formed from the *Ruellia*; the *R. Sabiniana* being named *S. Sabiniana*.

STYLIDIUM ARMERIA.—The leaves are grassy-like, about a quarter of an inch broad. The flowers are produced in long erect racemes, forming a cone of eight to ten inches long. Each blossom is three parts of an inch across, broadish petals, of a handsome purplish-crimson colour. It is a native of Van Diemen's Land, a herbaceous perennial, deserving a place in every greenhouse. This genus thrives best in a compost of equal parts of light loam, peat, and leaf-mould, to which a sprinkling of sand and bits of charcoal should be added. (Figured in *Magazine of Botany*.)

PLANTS NOW IN BLOOM AT KEW.

In the Greenhouse.

A considerable number of the Pea-flowered (Leguminosæ) tribe of plants are now in beautiful bloom, the best of which are the following:—

LODDIGESIA OXALIDIFOLIA. OXALIS-LEAVED.—It forms a dwarf, branching, bushy plant, with neat foliage, and pretty, smallish, pink-coloured flowers, borne in profusion.

CHOROZEMA SCANDENS.—A climbing plant, with neat glaucous leaves. The flowers are of a bright yellow, with a red keel, which has the appearance of a red eye. This plant is trained to a wire frame, and, blooming so freely, has a beautiful effect.

LALAGE ORNATA.—Oval leaves, medium sized. Flowers yellow, with dark claws and keel; profuse bloomer.

HOVEA ILLICIFOLIA.—A very neat plant, with holly-like foliage. The flowers are a bright blue, with a deep violet keel. Very handsome.

GOODIA PUBESCENS.—Foliage Laburnum-like, but small. Flowers yellow, with a dark centre, and in profusion. Very beautiful.

PULTENÆA SUB-UMBELLATA.—Very neat, narrow, myrtle-like foliage. The flowers are produced in fine heads, a golden-yellow in front, and streaked with crimson behind. A profuse bloomer.

CHOROZEMA MACROPHYLLUM.—Leaves large. Flowers orange colour, with a rosy-pink keel. Neat and pretty.

PULTENEA GLAUCA.—Narrow leaves. Flowers almost like those of a scarlet kidney bean, of a deep red colour, and the plant almost covered with them.

BOSSLEA CORDIFOLIA.—Small neat foliage, and a neat bushy plant. Flowers light yellow, in profusion.

HOVEA FERRUGINEA.—An erect-growing plant; leaves brown underneath. Flowers of a bluish lilac; neat and pretty.

PODOLOBIUM STAUROPHYLLUM.—Small holly-like leaves. Flowers a rich yellow, with a red keel, borne in profusion. Very handsome.

GASTROLOBIUM CUNEATUM.—A neat bushy plant, with small leaves. Flowers yellow, with a dark crimson keel, in profusion. Very pretty.

BOSSLEA ELEGANS.—A neat, narrow-leaved, bushy plant. Flowers yellow, with a maroon crimson outside; each nearly an inch across. Very handsome.

BRACHYSEMA LATIFOLIA.—With its scarlet, kidney-bean-like, deep red flowers, in profuse bloom, trained to a high, pyramidal, wire frame. Very pretty.

AOTUS GRACILLIMUS.—An upright neat plant, with small foliage, and literally overladen with long spikes of its immense number of deep yellow and crimson blossoms. Very handsome, and, by cutting back the plant after it has done blooming, it is readily kept a dwarf plant.

BORONIA TETRANDREA.—A very neat bushy plant, with pretty pinnate foliage. The flowers are produced in profusion. Each blossom half an inch across, of a pretty pink colour. A charming plant, which ought to be in every greenhouse.

APHELEXIS PURPUREA-MACRANTHA.—A plant, two feet and a-half high, and three across, had upwards of two hundred flowers; each of which is large, of a dark crimson-purple. It is the finest of the genus we have seen.

A. HUMILIS.—Flowers of a bright rosy crimson. It is a dwarfish plant, blooming freely. Very pretty.

A. SPECTABILIS.—Of medium-sized habit, blooming very freely. The flowers of largish size, and of maroon-crimson, tinged with rose. Very neat and pretty.

CLEMATIS GLYCINIODES.—A climber, ten feet long, blooming profusely in large panicles. Each flower an inch across, white. Very pretty.

C. ARISTATA.—A climber, twelve feet long, in profuse bloom. Each blossom has from five to ten petals, pure white, and the flower is nearly three inches across. It is remarkably showy and handsome, appearing like a sheet of snow.

SALVIA GESNERIFLORA.—With its large heads of rich scarlet flowers, are exceedingly showy.

ZIERII MACROPHYLLA.—A neat bushy plant, with lance-shaped leaves. The flowers are like small heads of *Lauristinus*, pure white, and are in profusion. Very pretty.

EPACRIS VARIABILIS RUBRA.—Wide bell-shaped, half an inch long; a bright rosy red.

E. FORMOSA.—Bell-shaped, half an inch long; peach coloured.

E. CARNEA LONGIFLORA.—Nearly an inch long, bell-shaped; bright pink colour; profuse bloomer. Very handsome.

E. CAMPANULATA CARNEA.—Flesh colour, bell-shaped, half an inch long. Very pretty.

E. FAIRBAIRNI.—Bell-shaped, half an inch long; deep pink. Very pretty.

E. VARIABILIS GRANDIFLORA.—Bell-shaped, half an inch long; bright pink. Very pretty.

E. IMPRESSA ALBA SUPERBA.—Bell-shaped, half an inch long; pure white. Very handsome.

E. OCHROLEUCA.—Bell-shaped, half an inch long; cream coloured. Pretty.

E. DENSIFLORA.—Bell-shaped; tube below pink, the upper part white. Very pretty.

E. COCCINEA.—Tube one inch long; a bright rosy scarlet. Very pretty.

E. CAMPANULATA BLANDA. Very wide bell-shaped, one third of an inch long; white. Very pretty.

E. WILMOREANA.—Tube nearly one inch long; rosy red, with a white end. Pretty.

E. ALBA-PENDULÆFLORA.—Wide bell-shaped, half an inch long; the flowers are in a drooping position down the sides of the shoots. Very pretty.

Thirteen of these are new varieties, exceedingly beautiful, and deserve a place in every greenhouse. They are profuse bloomers, grow freely, and are a valuable addition to this charming tribe; each being very distinct from any other.

GLORIOSA PLANTII.—Mr. Plant sent this charming species from Natal. The plant grows erect, like some of the *Alstræmerias*, three feet high. The first whorl of flowers is produced about a foot from the ground, and the second and third about a foot higher, at similar distances. The curious curled flowers are more scarlet than the *G. superba*, which many of our readers have seen. It merits a place in every stove.

KING OF THE FUCHSIAS (Meillez).—The flower is an enormous size. Tube orange, tinged with pink; sepals rose, with green tips; corolla orange and rose. Said to be much superior to any other *Fuchsia*.

MADAME LEMICHEZ (Meillez).—Flower very long; calyx rosy-lilac, with green tips; corolla a blue-lilac. Very beautiful.

LOUISA LELANDAIS (Meillez).—Flower very large; calyx pale orange, with light tips; corolla deep orange. Very fine.

HELIOTROPIMUM, *LOUIS NAPOLEON*.—The plant vigorous, and the flowers are produced in enormous large umbels. It is the deepest coloured existing. Very fine.

H. PICCIOLA.—A handsome dwarf plant, with large umbels of flowers; white, edged with blue. Very distinct.

H. PERFECTION.—A vigorous plant, having very small leaves, with enormous heads of white flowers. Very fine.

PENTSTEMON ATRO-CÆRULEUS.—An hybrid from the true *P. gentianoides*; vigorous grower; flowers very large, of a fine blue, with the mouth striped. Very superb.

P. GRANDIS.—Another hybrid, from the same as the last, and the flower as long, of a violet-blue, streaked with white and carmine. Very beautiful.

VERBENA M. AFFREE (Meille).—Flower very large, deep purple, with a large golden-yellow eye. A superb variety.

V. MARIE STUARD.—Large flower; white tinged with flesh, centre rose, with an amaranth eye. Very fine.

V. MADAME MEILLEZ.—Flower enormous size; bright rose, with a rich scarlet centre. Superb.

HYDRANGEA HORTENSIS FOL. VARIEGATIS.—The leaves are green, with a broad edging of pure white. Exceedingly handsome.

DODECATHEON MEDIA ALBA COMPACTA.—A very superb dwarf variety, bearing an enormous umbel of large flowers; white, with a yellow margin.

TIGRIDIA CANARIENSIS.—The flowers are a bright yellow, most beautifully spotted with rich crimson. A charming acquisition.

BALSAMINA LATIFOLIA ALBA.—In its appearance like the well-known *B. latifolia*, which has rosy-lilac flowers, the present variety has white ones. A charming companion to the species, worth a place in every stove or greenhouse.

DILLWYNIA SCABRA.—This is another beautiful, pea-formed, flowering, dwarf shrub from Australia. It blooms profusely; the flowers being in clusters along the shoots for several inches; they are of a brilliant scarlet, with a yellowish margin. Very handsome, and ought to be in every greenhouse.

IN MR. VAN HOUTTE'S ESTABLISHMENT.

CHIRITA SINENSIS VARIEGATA.—The leaves have pure white veins. Very pretty.

GESNERIA LEOPOLDII.—The handsomest of the genus. The flowers are large, in long spikes, of a rich scarlet crimson.

GESNERIA ZEBRINA SPLENDENS.—The flowers are more rich and brilliant, and the spotting deeper, and the velvet stripes of the leaves are more distant than the original species.

SPHÆRALCEA NUTANS.—Of the *Abutilon* tribe; the flowers are rose coloured, drooping, and very beautiful. These flowers are charming for a hand bouquet, mingled with others.

ARDISIA CRENULATA FRUCTU ALBO.—This is a very charming variety, having white fruit, and will form a striking contrast with the red-berried.

LAPAGERIA ALBA.—We figured the *L. rosea* in a recent volume, one of the most beautiful of flowers; the present one, it appears, has white ones. It is a very valuable acquisition. Its price is put down by Mr. Van Houtte at 300 francs.

HYDRANGEA JAPONICA, FOL. VARIEGATA.—This is a handsome variety, having variegated leaves of white and green.

MYRTUS COMMUNIS FLORA PLENA RUBRA.—A most charming double-blossomed Myrtle, having red flowers, and a handsome silver-edged-leaved Wallflower, have been obtained by Mr. Schnicke, in Prussia.

CHEIRANTHUS CHEIRI FL. PL. FOLIA ARGENTEA VARIEGATA.—A new variety of the Double Wallflower, raised by Mr. Schnicke, in Prussia; its leaves are bright green, edged with pure white. It is a decided acquisition to this much-loved flower.

PROPAGATION OF EPACRISES.

BY A LONDON NURSERY PROPAGATOR.

THIS charming tribe of greenhouse plants has had, within the last five years, the particular attention of hybridizers, and many most beautiful improvements have been raised; especially so in the hyacinth-like flowered and the bell-shaped. We now possess varieties from the purest snow white to the brightest scarlet and crimson. The habit of the plants, too, is improved, being dwarfer; and even with all, by stopping the leads, bushy plants are readily formed. The profuse flowering, too, is a great improvement, and by proper treatment, a succession of bloom with all the kinds may be had the entire year. The culture of them, too, is very easy; care being taken not to sodden them with water, nor must they be allowed to flag for want of water. Avoiding these particulars, giving them a free air, and a good sandy peat, well drained, they will flourish and bloom admirably.

Their increase from cuttings has been often said to be difficult. I have raised thousands by cuttings, and not more than one in fifty fails. Plants may be purchased very cheap, but amateurs who are desirous of increasing any particular kind may succeed to satisfaction by adopting the following method. The young shoots, about half ripened, must be those taken, and from an inch to two inches they must be shortened in preparing them for insertion in the cutting pot. Take a clean 48-sized pot, put a large crock in the bottom, then add a quantity of small crocks, or coarse cinders, until the pot is half full; upon this put a layer of moss beat down firm; fill up with fine sifted peat mould and white silver sand, an equal quantity mixed together, pressing it down firm to within a quarter of an inch of the rim of the pot; fill up with clean-sifted silver sand, passing a stick over the pot to make the surface level; give a slight watering with a fine rose pot or syringe; take a bell-glass, press it lightly on the sand so as to leave the circumference; then select your cuttings from last year's ripened wood. Cut the tops of the shoots about one inch long, strip the cutting half its length of leaves; lay it on your thumb-nail; with a sharp knife cut the base at a joint quite smooth, and when a sufficient quantity to fill the pot is prepared, insert the cuttings as far as stripped, keeping the tallest, if any, in the centre. Give a good watering to settle the sand about

them ; let them stand until dry ; cover with the bell-glass, and plunge the pot in a cold frame facing north ; keep the light on, protecting from frost with covering, or, for want of a frame, place the pot on a north shelf in the greenhouse, but by no means in the sun ; wipe the glass once a day ; water according to judgment, keeping them rather dry than moist. When the cuttings begin to grow, take the glass off occasionally for half an hour, and increase with air as the cuttings increase in growth, until it may be left off altogether ; then remove them to the greenhouse. Pot them off the following March into thumb-pots, well drained, using peat mould and sand in equal quantities ; place them in a cold frame until rooted. During summer, top any long shoot, and by the autumn you will have snug bushy plants, producing in spring beautiful pendant blossoms.

PROPAGATING CAMPANULA PYRAMIDALIS.

BY A LONDON AMATEUR CULTIVATOR.

SEEING an account in your CABINET on the cultivation of *Campanula pyramidalis*, which advises slips to be taken off in the month of April, and having most successfully cultivated these plants for several years by a far different method, I thought I would trouble you with a few remarks on the method I pursue. As soon as the plants have done blooming, I immediately turn them out of their pots ; the root I then break into as many pieces as I want plants, and put five or six of the pieces into a 48-sized pot, which is half-filled with mould, then put in the pieces, and afterwards fill the pot with the mould. Having the convenience of a frame, or hand-light, after watering, I place it over them. In the spring (about March), I pot them singly, and so let them remain during the summer in any cool part of the garden, where they grow vigorously. On the following spring, I pot them into 24-sized pots, and place them in the greenhouse, where they remain till they have done blooming. Last season I cut a white one up this way, and I now have thirty-six strong healthy plants for bloom the coming summer. I beg to observe, that if some of the largest pieces of the roots are selected, and placed upon any slight heat, they will bloom finely the following spring, the plants making their appearance through the mould in two or three weeks. They may be increased in the way I have been mentioning, entirely in the open air, and when strong enough for bloom be brought into the apartment of a house. When a plant of the blue-flowered has extended its spike, and before the flowers open, I have placed one or more in an entrance-hall, as well as sitting-room, where the plant has light, but not the sun shining upon it ; and in this partial shade the flowers become a most beautiful French lilac, far prettier than the blue or white flowers. In the sitting-room, which has an east aspect, I have the plant placed at the opposite side from the windows, which is the most shady place in the room. I have grown them eight feet high in these situations, and no flowering plant is more elegant, as well as being powerfully fragrant.

DWARF FLOWERING PLANTS OF THE BRUGMANSIA SUAVEOLENS.

BY MR. JAMES M'LAULAY, BREVITREE, CUMBERLAND.

As late in the spring as possible, before the buds are moving, I select a strong shoot well furnished with buds; cut the shoot into as many divisions as there are buds, and insert each bud into a large 60-pot, just covering the eye with mould; plunging the pot into a hot-bed of moderate heat, being careful of too much steam. When the plants appear, I give a little water, but at first moderately, or the cuttings will rot; when the plants are well rooted, I remove them into a colder frame, and by degrees harden them off. About the latter end of May, or beginning of June, I turn them carefully out of the pits into the open ground, where the soil is not too rich; water them occasionally, but not too often. About the beginning of September they will show for bloom: as soon as this is perceived, they are taken up carefully, with as much mould as possible, potted into pots suitable to their roots, and set in a cold frame, keeping them close until recovered from being potted, and they flower freely, forming a striking object for the greenhouse, the plants being quite dwarf, about a yard high, and bearing numerous fine-sized flowers.

DISSECTING LEAVES.

BY SOPHIA, OF ST. JOHN'S WOOD, REGENT'S PARK, LONDON.

I RECENTLY saw a number of most strikingly interesting and perfect specimens of dissected leaves, of various kinds, in the Museum at Kew Gardens, and it reminded me of a promise I had made some time ago, to send some particulars relative to the process I have very successfully practised in dissecting leaves, calyxes, and capsules of flowers, &c. The following is the method pursued:—

Cherries, Pear, Poplar, Ivy, Holly, or Maple leaves, &c., to be gathered in June or July, when the young leaves are at their full growth; put them in an earthen pan, full of rain-water; as it wastes fill it up, but do not empty out any of the water. Some of the leaves will be ready to dissect in a month, and some not in less than two. When the external membranes begin to separate, then is the time to begin the operation. The leaf must be put in a flat white plate, with clean water; squeeze the leaf gently with the finger and it will open on one side, the green juice will press out; then the two outward skins must be stripped off, first in the middle and along the sides, where they closely adhere, and if an opening is made they will easily come off: then wash the skeleton in clean water, and put it between the leaves of a book to dry. Pear and Holly have a double set of fibres, that must be separated with circumspection; one set of fibres is more perfect than the other. I must observe that I was not able to procure rain-water for the greater part of the leaves I have dissected, and that I succeeded without. Box leaves I found to require to remain several months in the water. Some leaves of the Spanish Chesnut I once had

for more than a year in water, and then was obliged to throw them away unchanged : I have not since been able to try them again. I have now a query to propose. I have succeeded perfectly in dissecting the leaves and the floral leaves of the Lime-tree, but the skeleton of the Lime-tree leaves remains green, and no washing will bleach it. Perhaps some reader of the *CABINET* will have the kindness to inform me how to bleach them, without injuring the fibre of the skeleton. The above is a dirty, and not a very sweet job, but the admirable beauty of the skeletons, in my opinion, fully compensates for the trouble.

TIGRIDIAS.

BY A LONDON SEEDSMAN.

SOME one lately requested information relative to the management of these beautiful flowering plants. I beg leave to state, that the only difficulty attending the culture of this plant is, its bulbs not being sufficiently ripe when taken up in the autumn. By this means they are apt to rot ; but if, with great care, they are preserved till spring, they become so exhausted by the means used to keep them that, when planted, the flowers, if any are produced, are extremely weak. To remedy this, plant them in a light soil and warm situation, being careful never to put them deep enough in the ground as to cover the crown ; if this be attended to, and they are taken up as soon as the tops decay in autumn, before they are saturated with wet, and retain all the soil to the bulbs possible, placing them where they will be preserved dry, and from frost, through winter, and they will keep sound and bloom vigorously each successive season.

TREATMENT OF GREENHOUSE PLANTS DURING WINTER.

BY AN ATTENTIVE OBSERVER.

I HAVE long been surprised that there has not been anything communicated to your readers on this subject, particularly when there has long existed so much mismanagement, and the consequent loss of plants during the period stated above. Conscious of the necessity of some improvement, I have drawn up the following particulars, which I trust may be of service where required, and beg their insertion.

The stock of such plants is usually placed out-doors in summer, and the great objects to be obtained are, bushy, uniform plants, having the shoots of the present season well ripened, or hardened, as some people say. This necessary advantage should be realized by the middle of September at latest. About the last week in August, the pots, if they have been plunged in ashes, or other material, where the roots have pushed into, should be taken up, and all such be cut away, and the pots be replaced. This pruning will not injure the plant, and no apparent check will be sustained, and it prepares the plants for removal into the greenhouse by the middle of September. In placing them a gradual

descent must be maintained, to allow showy plants to be conspicuous, thus preventing a monotonous appearance. On being *first* brought in, do not have the plants close together, or the tender leaves will be likely to turn yellow and fall off; after a time they may be put closer with safety. In every collection, plants of the same species and habit should be, as far as is practicable, kept together; many of them, as *Ericas*, &c., do not succeed well when mixed with other plants, especially large-leaved ones. Some plants, too, require airy situations, others the contrary; these essential particulars should be duly attended to. Cape plants particularly delight in an airy place, the *habit* of every plant should be accommodated. It only requires attention at the first arrangement, and being secured after destruction is prevented.

When they are all housed, and dirt of every description taken away, let as much free air be given as possible in the day-time; and even at night, should the weather prove moderately mild, and free from any appearance of frost. In fact, I have seldom seen frosts at this early season so severe, as to injure any greenhouse plants, that were not immediately exposed to its perpendicular effect: therefore the front windows may be kept open continually, unless there is a prospect of its being particularly severe, or accompanied with cold driving winds, in which case it will be necessary to keep them pretty close.

If air is too sparingly admitted at this season, when many of the plants have not yet finished their summer's growth, it will inevitably cause them to produce weak and tender shoots; which will be extremely liable to damp off at a more advanced season, when the house must be unavoidably kept close on account of the severities of the external air; and besides, it will tend to give them a more general tender habit, and render them less able to resist the winter colds than they otherwise would. Hence it is evident, that they cannot receive too much air, whenever the state of the external air will admit of it, by being free from all appearance of frost; as it will be so much to their advantage to be thus hardened, before the winter assumes its severest front.

This is a practice I would strenuously recommend to all cultivators of exotics, to be observed the whole period they remain in the house, their own observations on the state of the weather being their constant guide.

Water should also be plentifully administered when they are first taken into the house, as the dry board, on which they now stand, as well as the elevated situation, and free circulating air, occasions them to require more than when they stood on the moist earth; however, by no means go to the extreme, giving it only when evidently necessary.

It is a common, but, in my opinion, a very erroneous practice, to place pans under the pots indiscriminately, and by many they are regularly filled with water twice or thrice a-week, or perhaps every day, whether the plants may want it or not; and this they are pleased to term a saving of labour; and it eventually becomes so in fact; for they have seldom so much care and trouble on their hands, in the spring, many of the most curious plants being killed by this treatment; for, although it may not perceptibly injure the coarser kinds, its pernicious effects on the tenderer sorts must be evident to the commonest observer; as the

earth in the bottom of the pot, by being constantly in the water, becomes coagulated, and sour, and is consequently liable to rot the young fibres, by which the plants in general contract a languid and sickly habit.

As the close foggy weather advances, water must be given more sparingly, else it will conspire with the atmosphere to increase the damps of the house; which will inevitably injure the plants by rotting their leaves. These, and dead flowers, should be picked off as soon as they are observable; otherwise they will make a very disagreeable appearance.

Early in November all the tenderer Cape bulbs are usually planted; viz., *Ixia*, *Iris*, *Moræa*, *Gladiolus*, *Antholyza*, *Galaxia*, *Oxalis*, *Lachenalia*, *Ornithogallum*, &c., as they generally commence vegetation about this time, and they supply a most beautiful variety of flowers for the ensuing spring and summer.

When growing they should be kept pretty moist, particularly the stronger species; otherwise they will not flower freely, and such as do will not be so fine: however, when they have done flowering, and the grass indicates an end to vegetation for the season, they should be gradually dried; and when perfectly so, either set in the pots in a dry sheltered place, or otherwise taken out of them, and put in separate paper bags, in sorts, until the autumn: I prefer the latter process; it is necessary to keep them in sorts, otherwise the strong, which are not always the finest kinds, would smother the delicate ones, that in many instances produce the most brilliant, and frequently odoriferous flowers.

The months of November and December seem to be more noxious to the health of plants, than any other season; by reason of their being full of sappy leaves, and the remains of many of the autumn flowers being still on them, when the weather (which at this time generally becomes close and chilly), renders it necessary to keep the house shut, and warm; this occasions a most pernicious damp to exhale from every part of the house, and even from the earth in the pots; which fixes on the leaves and other parts of the plants to their inevitable injury, particularly the younger parts, such as were the produce of the preceding summer. If this kind of weather continues for any considerable time, it will be advisable to give a little fire heat, to help in drying up these baneful exhalations, and also as much air as can be safely admitted by the doors and front windows, more especially when fire is added; otherwise the heat of the flues will, instead of expelling the contaminated air, rather occasion it to exhale more freely, and be of worse consequences.

At this season also, the plants should be regularly examined to clear them of all dirt, and also to scrape off any moss, &c., that may have grown on the surface of the mould, and to renew it with a little fresh loam. This contributes much to their good appearance, if neatly executed.

Very little fire heat seems to be requisite to the preservation of greenhouse plants in this climate; in fact, the less it is found necessary to use the better. I have never practised it (except in the case of damps, as before mentioned), until I perceived the frost so severe, as to

lower the spirit in the thermometer several degrees below the temperate point, and then merely sufficient to raise it again to the above-mentioned point. If this can be done without the assistance of fire, so much the better, for which purpose bass mats must be used along the lower parts of the house, where they can be conveniently fastened; these will be of infinite service even when fire is used, as less of that element will suffice; but they should be always taken off in the day to admit the light, unless the weather happens to be particularly severe.

Sometimes in the depth of winter there is a succession of very clear weather for several days together, wherein warm sunny days succeed the coldest frost, and nights in which fires have been absolutely necessary; in this case it will be requisite to give all the air possible in the day (unless strong harsh winds, or other occasional preventatives happen to prevail), observing, to shut the windows up close early in the afternoon, so as to include part of the natural heat of the atmosphere within the house. Such weather renders an increase of water necessary, especially over the entrance of the flues, where the fires have the greatest force. It should be administered in the morning, and ought to be kept in the house all night to expel any frosty particles it may have imbibed, and render it nearly equal to the temperature of the air of the house.

MISCELLANEOUS SECTION.

HORTICULTURAL SOCIETY, *March* 16.—Among subjects of exhibition, Mr. Meredith, gardener to the Duke of Sutherland, at Cleiffden, sent some admirable specimens of *Begonia manicata*, and a hybrid raised between that sort and *hydrocotylifolia*. It had the general aspect of *hydrocotylifolia*, but added the constitutional vigour and some other peculiarities belonging to *manicata*; while altogether it was a more desirable plant than either of its parents. A Banksian medal was awarded it. The same exhibitor also furnished a bouquet, with a view to illustrate a good mode of packing such things for travelling. Two parallel lines of string, about an inch apart, were fastened between the four opposite sides of a square wooden box, so as to intersect each other in the middle, but at different levels. The shank of the bouquet was then passed down where the lines intersect, embedded up to the flowers in damp moss, and tied firmly to the bottom of the box. In this way the bouquet is kept fast in one position, and travels safely. We must add that the interest of such exhibitions as this would be greatly enhanced if they were accompanied by written explanatory memoranda. We think, indeed, that in the absence of such memoranda they should not receive prizes. Messrs. Henderson, of Pine-apple-place, sent *Epacris hyacinthiflora candidissima*; a curious little deep yellow-flowered *Acacia* called *squamata*, with needle-like processes in the place of leaves; four plants of the Cape *Lachenalia luteola*; and a good specimen of *Dielytra spectabilis*, whose flowers were, however, somewhat deficient in colour, owing to their having been produced in too much heat. A certificate of merit was awarded it.—Messrs. Jackson, of Kingston, sent two seedling *Camellias*, named *Duchess of Buccleuch* and *Martinii*. The latter

is a promising deep crimson-flowered kind, with a white stripe down the centre of each petal.—From Ealing-park, Mrs. Lawrence sent a fine example of the Hong Kong *Enkianthus reticulatus*, the charming *Boronia triphylla*, covered with pink starry flowers, the white *Eriostemon scabrum*, *Styphelia tubiflora*, *Lycaste Skinneri*, the long-tailed Lady's Slipper (*Cypripedium caudatum*), and cut flower spikes of *Amherstia nobilis*. It was mentioned that at Ealing-park, the *Amherstia* is now as large as a good-sized apple-tree; that it has been in flower ever since Christmas; that nearly one hundred and seventy spikes of lovely inflorescence have been cut from it; and that about as many more yet remain on the tree. A certificate of merit was awarded for the *Cypripedium*, and a Banksian medal for the stove and greenhouse plants.—An example of the Sikkim *Rhododendron ciliatum*, of which a good specimen was shown at the last meeting, by Messrs. Standish and Noble, was furnished by Sir Joseph Paxton, from Chatsworth. On this occasion it was as colourless as the white Indian Azalea; but whether this was constitutional, or merely the effect of circumstances, could not in the present instance be clearly determined upon.—Mr. Ingram, gardener to Her Majesty, at Frogmore, sent a pretty *Epacris*, a seedling from *miniata*, and a Cayenne Pine-apple, weighing 7 lbs. 2 ozs. A Banksian medal was awarded for the latter.—From Mr. Tillery, gardener to the Duke of Portland, at Welbeck, came ripe fruits of the Japan Medlar (*Eriobotrya japonica*), for which a certificate of merit was awarded. They were the produce of a tree which fills an entire house at Welbeck, and from which three or four dishes were stated to have been gathered weekly for these last six weeks, and a considerable quantity is said still to remain on the tree. They are much esteemed at Welbeck for dessert.—From the Society's garden came a pretty pink Azalea, sent from China, by Mr. Fortune; *Rhododendron nilagiricum*, an exceedingly handsome bright rose-coloured kind; *Forsythia viridissima*; the New Holland *Dendrobium Kingianum*; the little green-flowered *Clematis pedicellata*: and some other plants.

SIKKIM RHODODENDRONS.—From a remark in the *Gardener's Chronicle*, it appears that the fact of most of the Sikkim *Rhododendrons* having, though unprotected, thriven in the open air throughout last winter is not generally known. Small plants of all the species were planted out, late in autumn, among the *Rhododendron* clumps on either hand of the main walk at Kew. Not one of these has been killed; all, with few exceptions, are at this moment healthy, and many have flourished. There are the following:—*R. argenteum*, from 6 to 7,000 feet; and *R. Campbelliæ*, from 8 to 10,000 feet, both very strong and luxuriant; *R. barbatum*, 8,000 feet; and *R. campanulatum*, 11,000 feet, several plants of each strong and healthy; *R. ciliatum*, 10,000 feet, several specimens in the same state, two or three have well-formed flower-buds, and will probably blossom in a week or two; *R. lepidotum*, 12 to 14,000 feet, a little of, much stronger and healthier than the plants in the greenhouse; *R. argenteum*, 8,000 feet, a few robust specimens; *R. glaucum*, 11,000 feet, many particularly healthy young plants; *R. campylocarpum*, *cinnabarinum*, and *Thomsoni*, all from 10

to 12,000 feet, several plants (a dozen or so) of each, and all strong and healthy; *R. Dalhousiæ*, 7,000 feet, a few plants, not vigorous or promising; *R. Falconerii*, 10,000 feet; *Aucklandii*, 6 to 7,000 feet; and *lanatum*, 10,000 feet, one or two fair specimens of each. The above have had no protection but such as the surrounding low *Rhododendron* bushes have afforded; and upon the whole they appear to have suffered less from shrivelling of the ends of the leaves, than those in the conservatory have. The trying season has, however, but now commenced, and I have little expectation of many of them surviving the spring, without much shade and moisture. The soil at Kew, even in these made beds, is light and dry; the roots of the young plants do not strike deep, and I felt the leaves of several to be quite warm under the sun of last Monday, clearly indicating a checked circulation. In their native localities, at this early state of growth, young plants have a very wet, cool subsoil in the spring months, so that though the sun's rays be more powerful than in England, they are provided by an abundance of humidity at the root, against any injury that would arise from a suddenly increased circulation. Most of these species again, being natives of 8 to 12,000 feet, experience a very much colder winter than that of England is; they are consequently kept in too excited a state here, and the spring frosts of April are all the more to be dreaded. In the Himalaya, the first great increase of temperature occurs in March, which is 8 degrees warmer than February; this brings forward the Himalayan plants, which are not exposed afterwards to night frosts. In England, an equivalent increment of temperature does not occur till May; but our winters are so mild, that the cultivated Himalayan plants are as forward in April in England as they are in their native country, and consequently suffer extremely from our night frosts. In the conservatory, three plants of *R. ciliatum* remain in flower; these flowers are very much larger than I ever saw them in the Himalaya (several blossoms are 3 inches diameter!), but nearly white, probably from the difference between the amount and intensity of solar light at 10,000 feet in May, of lat. 27° , and at the level of the sea in March, of lat. 52° . I have been just shown a magnificent head of *R. arbo-reum*, in flower, from Mr. Barclay, of Bury Hill, who informs me that the plant is a dwarf low shrub raised from Kemaon seeds, and grown without any protection.—*J. D. Hooker*.

TROPEOLUM LOBBIANUM.—I am glad to see this handsome species of a beautiful genus brought under notice. I consider that wherever there is room for its cultivation it ought never to be neglected on account of its superabundance of charming flowers and great superiority over many of our climbers at this period of the year. It, however, wants rather more room than can be given it on a trellis in a pot. There is a plant of it at Raby Castle growing against a trellis on a back wall, covering a space of 30 feet long by 12 feet high, and it has been in bloom ever since November last, producing thousands, aye, tens of thousands of bright orange-scarlet flowers. It has been a perfect gem, and now that we have got more sun and length of day, it is growing vigorously, and there are thousands of blossoms on it yet to come out. It is growing in a border, composed of strong hazel loam,

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mushroom-bed dung, and charcoal well incorporated together, and turned in as rough as possible. It is watered occasionally with diluted soot or dung water, in the proportion of a quart to a 4-gallon can. I think it would make a beautiful rafter plant in a conservatory, it festoons so beautifully. The only drawback would be its old leaves turning yellow, and also the decayed flowers. I find that cuttings of it may be struck at any period of the year in ordinary soil in bottom heat.—*J. F. Roberts, Raby Gardens, Durham, March 17.*

COMPOST FOR PELARGONIUMS.—Visitors to the Grand Floral Shows at Chiswick, Regent's Park, and Surrey Gardens, have often admired the splendid specimens of Pelargoniums, exhibited by Mr. Beck, under the management of Mr. Dobson. They were grown in the following compost, viz., the top spit *full of fibre* from a meadow, mixed with one-third green stable dung thoroughly incorporated and laid up in a heap for about two years, and well chopped over during winter. When ready for use he says, before potting, "mix up with the loam four shovels of rotten cow-dung, the older the better, to one barrowful of mould; to this add an 8-inch potful of silver sand." Such is the kind of material in which such profuse blooming specimens are grown.

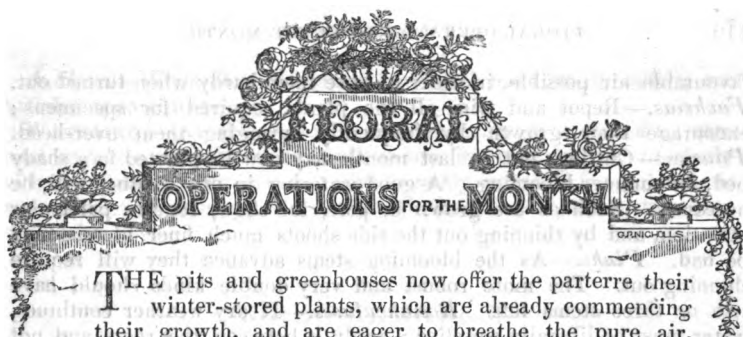
BEST TULIPS IN EACH CLASS.—Mr. Willison, nurseryman, &c., of Whitby, recently applied to all the celebrated Tulip growers in this country for each one to favour him with the names of what they considered the best six varieties of Tulips in each class, viz., Bizarres, Bybløemens, and Roses. He obtained lists from eight individuals, and, with his own list, he gives the result in the *Midland Florist* for April. The whole of the lists contained forty Roses, forty Bizarres, and forty-seven Bybløemens. The eight best in each class, as selected, are:—

Rose Tulips.—Aglai, 6 (in six lists out of the nine given); Heroine, 5; Triomphe Royale, 5; Catalina, 3; Bijou, 3; Princess Maud, 3; Claudiana, 3; La Vandicken, 3.

Bizarre Tulips.—Polyphemus (Lawrence's); Duke of Devonshire, 6; Charles X., 6; Pilot, 5; Surpass Catafalque, 4; Polyphemus (Brown's), 3; Charbonnier Noir, 3; Magnum Bonum (or Sir Sidney Smith), 3.

Bybløemen Tulips.—Salvator Rosa, 7; Princess Royal, 6; Maid of Orleans, 4; Thalia, 4; Violet Alexander, 3; Maid of Athens, 2; Sable Monarch, 2; Queen Charlotte, 2; Violet Brun, 2; Pandora, 2.

The lists will be a useful guide to persons beginning to cultivate this beautiful tribe of flowers. The above varieties may be fully depended upon as of first-rate excellence for exhibiting. There are other very superb varieties, but, being new, and only in the hands of one or two individuals; are not included in the lists given. Those given above may be generally had, and at reasonable prices, of the general growers.



THE pits and greenhouses now offer the parterre their winter-stored plants, which are already commencing their growth, and are eager to breathe the pure air. Caution must, however, be exercised in being prepared for occasional frosts, with some protection at nights in case of need. If your plans are not yet fully arranged, as to bedding out, &c., lose no time; particular attention should be paid with contrasting the colours to give a good effect. A flower-garden may be richly furnished with plants, but be very ineffective if the colours are badly arranged. For producing a brilliant effect in masses, reject parti-coloured flowers; only use pure and decided colours, such as scarlet, pure white, deep purple, bright yellow, &c.; those which are in close affinity kill each other. Take care not to mix plants which are of doubtful duration when in bloom with those of a more permanent character, remembering always that the beauty of a formal flower-garden depends upon its being in all its details a perfect work of art, in which no blemish should occur. There must be high keeping, symmetry, judicious arrangement of colours (traceable to fixed principles), or it will not form a satisfactory whole. This should be particularly attended to. Many persons plant their stock so thinly, that their beds are not covered till late in the season; we advise *thick planting* for speedy effect.

When annuals are required for late flowering they may yet be sown; and hardy annuals that have come up too numerous should be thinned out, so as to retain but enough to be vigorous. Tender annuals, raised in pots or frames, should be taken, with as much soil to the roots as possible, and after the middle of the month be planted out. After all planting is done, the next operations will be training and pegging down the plants; this is a most important process towards having well-furnished beds. Climbing plants will now require training from time to time, according to their growth.

FLORISTS' FLOWERS.—Amongst these we may class the *Antirrhinum*; many of the kinds now in cultivation are exceedingly pretty, and deserve to be grown. Now is the best time to plant them out. *Carnations* and *Picotees* are by this time in their blooming pots; and as they advance in growth, attention will be necessary to stick and tie them up neatly. Stir up the surface-soil of the pots, and add a dressing of mixed loam and well-decayed dung. *Cinerarias*.—As these go out of bloom cut down the stems, which will induce an abundance of shoots for increase, and turn them out into the open ground where they are partially shaded. *Dahlias*.—The *third week* in the month is as early as it is safe to commence planting out. The young plants will be greatly strengthened by repotting them into larger pots, giving all the

favourable air possible, in order to have them hardy when turned out. *Fuchsias*.—Repot and trim all the plants required for specimens; encourage their growth by frequently syringing them over-head. *Pansies*.—Cuttings put in last month may now be planted in a shady bed, for summer blooming. A good watering in dry weather will be necessary. Such as are grown in pots, for show, require particular attention, and by thinning out the side shoots much finer blooms may be had. *Pinks*.—As the blooming stems advance they will require thinning out. The more robust and very double kinds should have two or three stems left. *Ranunculuses*.—If dry weather continues, water must be liberally supplied; apply it between the roots and not over the foliage, and use rain-water if possible, preferring evening for the operation. *Tulips*.—The top cloth should at once be got on, and never let the sun reach the flowers after they show colour, but give all the air possible.

IN THE FORCING-FRAME.—Continue to strike cuttings of stove and greenhouse plants, and pot off such as are struck. Plants intended to be flowering specimens for the greenhouse, such as *Achimenes*, *Gloxinias*, *Gesnerias*, &c., should be grown here, and brought forward as rapidly as practicable. What are termed greenhouse annuals, as *Balsams*, *Cockscombs*, *Salpiglossis*, *Rhodanthe*, *Thunbergias*, &c., should be got on quickly. A strong stimulating soil, copious waterings, and ample pot room, together with bottom heat, are inseparable necessities to their successful cultivation.

IN THE GREENHOUSE, &c.—A free ventilation is of importance, and by closing with a humid atmosphere early in the evening a vigorous growth will be best promoted. Give liberal shifts to such plants as now require it before the roots become matted; much injury is often done by deferring until a general shifting. *Camellias*, such as have formed their flower buds, should be placed in a sheltered and shady situation out of doors. *Ericas* should have the ends of their shoots pinched off, to render them bushy and spreading. Climbing plants should be neatly tied as they advance in growth, and abundance of flowers will be the result. Shrubby plants of weak growth, and which naturally make *long frail shoots*, are much improved by bending down the branches, and fixing them to a wire attached to the rim of the pot; in this manner the nakedness of the plant at its base is hidden, and the check imposed on the ascent of sap will induce an increased supply of shoots.

Pelargoniums.—Never allow the plants to flag, or the bottom leaves will turn yellow, and the plants then become naked. Put cow, horse, and sheep dung in equal parts, with a sprinkling of quick lime into a tub, and to one peck of these add five gallons of rain or other soft water. When taking it for use draw it off clear, and give the plants a watering twice a-week. Give air freely, shut up early, and syringe the plants overhead three times a-week till the flowers expand. Fumigate to keep down green fly.

Calceolarias.—Keep the lower side shoots pegged down; it will induce roots to push up the stems. Fumigate occasionally to keep down the green-fly.

Azaleas.—When done blooming the growth must be promoted; see Articles upon culture.

WATERING.—At this season increasing attention is requisite; care must be taken that the *entire ball* of soil is made moist, particularly with the plants grown in sandy peat or sandy loam; a few holes made by means of an iron pin down through the ball will admit water into its interior.

BRIEF REMARKS.

THE CHRYSANTHEMUM.—Mr. George Taylor, of Stoke Newington, favoured us a year ago with an excellent article on the culture of this tribe of plants, it appeared in the volume for 1850. Since that time he has wrote a "Treatise on the Chrysanthemum," which may be had of any bookseller. Mr. Taylor is one of the best growers, and successful exhibitors. The following varieties he recommends to be grown for cut blooms, for exhibiting at the shows. The first nine are admirably adapted for growing against a wall:—

Aristides, red.
Beauty, blush and pink.
Campestroni, deep rosy-purple.
Clustered Yellow, golden yellow.
Duke, blush.
King, rose.
Princess Marie, rose.
Pio Nou, Indian red.
Vesta, white.
Annie Salter, canary yellow.
Cyclops, straw, and brown back.
Christine, lilac.
Defiance, white.
Duchesse d'Abrantes, deep bright rose.

Dupont de l'Eure, purple and orange.
Formosum, creamy white.
Gem, white tipped with pink.
Goliath, white.
Lysias, bright cinnamon red.
Nonpareil, dark rosy-pink.
Phidias, rose and white.
Rabelais, reddish carmine.
Rebecca, light rose.
Sydenham, light red crimson.
Queen of England, blush.
Two-Coloured Incurved, red and yellow.
The Warden, orange.

Six of the best Anemone or Aster flowering varieties, are—

Gluck, bright yellow.
Fleur de Marie, fine clear white.
Nancy de Sermet, white.

Madame Godereau, white.
Marguerite d'Anjou, nankeen.
Reine Marguerite, lilac blush.

WATERING.—Every point in plant culture is of consequence, and must be diligently attended to with care and judgment. If one is ill or carelessly done, it renders every other point properly attended to nugatory, and none more than that of watering. Some plants, it is true, have such strong or accommodating constitutions, that they will bear for a time too much or too little water with impunity: but that is not the case with the genus *Epacris*, though even they are not so dangerous to neglect as the Heath tribe. When newly potted, they do not require so much water as when the roots begin to fill the pots, and the branches are then growing rapidly, and a large quantity of fresh foliage is produced. The quantity of water then, as the plants grow, should be proportionately increased, especially during the summer months; and when it is applied, enough should be given to thoroughly wet the whole soil in the pot. The dribble by dribble system of watering is very mischievous; one-half or more of the ball is never moistened at all. This may be easily seen by turning the ball out of the pot two or three hours after watering; the liquid will be found only to have reached perhaps an inch or two below the surface; and in that case how can the roots exist or thrive in such dry-as-powder soil? When, therefore, a plant needs water, give it liberally; but, on the other hand, take care that it is not glutted or soddened with it. Too much is quite as injurious as too little. The surface will then appear dry, whilst the inside will be too wet. The roots then perish at the ends, the young shoots flag in consequence, and the unthinking operator waters again heavily, and the evil thereby is increased; the leaves turn yellow, and often

death ensues. Avoid, then, these extremes, and the plants will continue healthy, and progress satisfactorily.—*T. Appleby. (The Florist.)*

A TULIP BOOK.—Mr. William Harrison writes in the *Midland Florist* for March, "A fresh Tulip book should be made at leisure every year, copied from the *CABINET*, writing the names of the flowers on the left-hand page only, and leaving the right hand one vacant for remarks, thus :—

TENTH ROW.	REMARKS.
1. Triomphe Royale	pure bottom, good cup, light flame.
2. Addison	p. b., g. c., grand feather.
3. Duke of Northumberland	p. b., g. c., grand flame.
4. Anastasia	p. b., g. c., fine dark ro. feather.
5. Lawrence's Friend	p. b., g. c., dark f. and fl.
6. Polyphemus	p. b., g. c., light fl.
7. Lady Crewe	small, fine f.

This keeps a correct account of the different strains of the varieties in your possession, and is an interesting record to refer back to in future years. The following abbreviations may be used, as they occupy little space, and are sufficient to show the character of the different flowers :—p. b. means pure bottom, g. c. good cup, f. feather, fl. flame, l. light, h. heavy, d. dark, s. stained stamens, p. s. pure stamens, &c.

[Such an arranged book would be a valuable pocket companion for every person who delights in flowers in general : descriptive particulars of all they admired being recorded, would not only prove interesting to review, but be very useful in making selections for future cultivation.]

SOIL BEST SUITED FOR THE ROSE.—I have visited all the nurseries of the large Rose cultivators in England, and in no part have I found them grow and bloom vigorously as they do in the county of Hertford. The soil they grow best in is a rather strong yellowish loam, not less than half a yard deep. This being enriched freely with *well-decomposed* dung taken from the cow-yard, grows them to perfection, and they endure for many years in a vigorous state, with proper pruning, &c. All who desire to grow the Rose well, and have not such a *deep* loamy soil, should, as far as practicable, provide a bed of similar character. Shallow, gravelly, sandy soils will soon destroy all the Roses planted in them.—*Rosa.*

BUDDING CHINA ROSES.—Under the head "Flower Department," in one of the Numbers of your Cabinet, you mentioned it, was time for "budding all sorts of Roses, except China and its varieties." I shall feel obliged, if you will inform me when the proper time is for budding them.—*An Amateur of Roses.* [The best time for budding the varieties of the China Rose is in the month of April, or at least as early as the bark will rise freely. Take off the bud formed the preceding year, with a small portion of the wood attached to it, as recommended for Camellias; they will grow freely, if properly inserted and well bound with bass, with greater certainty at this season than at the usual one in July.]

FAILURE OF ERINUS LYCHNIDEA.—A reader of the *FLORICULTURAL CABINET* would be very glad of some instructions on the culture and propagation of *Erinus Lychneida*. A plant belonging to the said reader is dying, without any apparent cause, in the pot in which it bloomed profusely for the second time last season. It was moved early into a larger pot and richer soil. No grubs nor worms are at the root, nor any appearance of decay. Also some hints as to the cultivation of *Genista Linioides* and *Vestia Lycioides* (the hardiest that they will bear) would be very acceptable.—A. B. L.

FAILURE OF RAISING CAMELLIAS FROM SEED.—Being very partial to the Camellia, and having what is called a good collection of them, I have for three or four years taken some pains to obtain seed from them, and in which I have been very successful. I have been particularly careful in planting my seed in the same soil in which I grow my plants, but without ever having been able to get a single seed to grow, although placed in good bottom heat and carefully attended to; my disappointment has therefore been (as you may well imagine) very great. I have again this year a large quantity of very fine seed, which I have been most careful in impregnating with some of my best sorts, and as I am very desirous of being more fortunate than heretofore, I trust I shall not be considered as wishing to pry

too deeply into the secrets and mysteries of the Camellia flower, in requesting the favour of some information (through the medium of your very interesting and useful publication) as to the proper method of growing these seeds; namely, the best time to plant them, the proper soil, and the treatment most suitable to them. Perhaps some of your correspondents, who are conversant with the subject, will oblige me by information thereon.—*Tyro*.

LABELS.—I have seen several remarks in your pages lately respecting the advantages and disadvantages of different labels for plants. I enclose two, which I always use, and which have been in pots twelve months. The wood is first painted with genuine white lead, ground stiff in linseed oil, which must be thinned with spirits of turpentine, and laid on in the usual manner. When dry, it is easy to write upon it with ordinary ink. The effect of a house thus labelled is neat and light. After the labels are written upon, I varnish them twice with a quick drying varnish, to prevent them from absorbing moisture. Of the specimens sent, the one with two wires is placed upwards on the stand beyond my easy reach, and cannot turn round when watering; the other I use for those plants close at hand, and which are easily examined. It is needless to say, that they are of my own make.—*H. S. Blundell, Hull*. [These labels consisted of thin square wooden heads, with the corners cut off. One of them was supported by two small copper wires; the other by one only. They are exceedingly legible and neat, and looked as if they would last good for years.]—*Gardeners' Chronicle*.

PROPAGATING CAPE ERICAS.—The most general method of increasing the Heath in this country, is by propagating from cuttings of the young shoots, which should be taken off when the wood becomes of a firm texture, when it will not be so liable to be injured by damp, as is frequently the case when put into the cutting-pot in a tender state. The best season for putting in Heath cuttings is from March to July; but the operator must be guided in this by the state of the shoots which are intended for this purpose. In fact, most of the species will strike root if put in at any time of the year, provided the cuttings are taken off when in a fit state. To procure shoots of the less free-growing sorts, they may be assisted by placing the plants in a little artificial heat, at the early part of the season, which will be the means of furnishing good cuttings; when they should be carefully stripped of their leaves to about half the length of the cutting, with a sharp knife or scissors, and the end cut clean across. They will then be ready for inserting into the cuttings pot, that should be previously prepared, and filled within a couple of inches to the rim with the drainage; and then have a layer of the fibrous parts of the soil placed over the crocks, when the remaining space should be filled up with sharp pit sand, well washed, and cleared from all earthy matter, &c. The sand should, lastly, be well watered, and made perfectly firm and level, when it will be fit for the reception of the cuttings, which should not be inserted deeper in the sand than is necessary for the fixture of them, to avoid being displaced in the watering, which should be liberally supplied while they are striking root.

Many of the sorts will have formed good roots in the course of eight or ten weeks, whilst others will require as many months. In autumn and spring the cuttings should be placed in a shaded part of the stove; but in the summer season they will succeed equally well in a cold frame, shaded from the mid-day sun.

ON FLOWERING DUTCH BULBS.—In your March Number are some excellent directions for the treatment of Dutch bulbs in pots; but what I am particularly desirous of knowing is, the management of such bulbs after they have done flowering in water. I am particularly fond of these beautiful flowers grown in glasses, and generally succeed in having them flower very nicely in the winter, as I buy very good roots. But if you, or any of your correspondents, will inform me how to treat them when they have ceased flowering, I shall be extremely obliged. I am aware they will deteriorate, and probably not blow for some seasons again in water, but with me they have ceased to flower at all.—*Amicus*.

ON PELARGONIUM ARDENS.—I have had a plant of the *Pelargonium ardens* major (one of the bulbous-rooted Cape Pelargoniums) for some years, and changed the description of soil it was in three or four times, but I have not been able to cause it to produce blossoms; the plant has been generally in a healthy state, and I have succeeded in increasing my stock, as I have several younger plants. The old plant, as well as the young ones, has been generally kept in a hot-bed. Perhaps some of your readers would assist me. I ought to add, perhaps, that I have no

conservatory to turn it out into, but have a good greenhouse. I am partial to this Cape section of Pelargoniums, and much admire the very distinct beautiful kinds that are shown at the Exhibitions at Chiswick, Surrey Gardens, and Regent's Park. I should be greatly obliged if some reader, who has had experience in their successful management, would favour me with the necessary particulars. I would purchase all the kinds if I could manage them properly; but not succeeding with the *P. ardens major*, I am afraid to venture farther, but with instructions from a practical grower.—*Amateur Florum*.

BLOOMING SPARKALIA FORMOSISSIMA (*Amaryllis Jacobææ* of some).—A correspondent recently asking for advice as to this plant—I beg to state that I have succeeded admirably to bloom it for many years by the following treatment. In May I plant my bulbs in a border of sandy peat and loam, in a sheltered situation, in which place they remain until September. I then take them up and dry them, taking care not to injure the roots. When in bloom, the flowers must be sheltered from rain or rough winds. I keep the bulbs in a dry room until the returning season for planting.—*A Country Curate*.

AN EFFECTUAL METHOD OF BANISHING ANTS FROM ANY PARTICULAR PLANT OR SPOT INFESTED WITH THEM.—With a trowel turn up the soil containing the ants, eggs, &c.; let it lie loosely, and pour upon the place a pot of sand. In a few days the ants will have deserted the spot, being effectually prevented by the falling in of the sand from continuing their labours.—*Experimenter*.

ACHIMENES SUITED FOR FORMING WHAT ARE TERMED SPECIMEN PLANTS FOR EXHIBITIONS.—In the *Cottage Gardener*, Mr. Appleby states the following to be the best. *Achimenes gloxiniflora*, white, spotted with crimson; *A. longiflora*, blue; *A. Jauregia* (*A. longiflora alba* of some), white, with pink stripes; *A. Mountfordia*, scarlet; *A. patens*, purplish crimson; *A. pedunculata*, orange, spotted with crimson; *A. picta*, orange scarlet; *A. Tugwelliana*, purplish crimson; *A. venusta*, rosy purple. To these may be added, *A. floribunda elegans*, bright rose. These grown, as is done at Kew so admirably, in pans eighteen inches across and six inches deep, will make showy plants. The compost Mr. Appleby recommends is formed of chopped sphagnum (white moss), fibry peat, turfy loam, and half-decayed leaves, in equal parts, with a free mixture of sharp sand. Chop the moss pretty fine; it will mix better with the other materials. At Kew, the compost is richer. See Volume of FLORICULTURAL CABINET for 1850, where we gave particulars.—*EDITOR*.

DOUBLE CRIMSON, AND DOUBLE WHITE FLOWERING PEACHES.—A few months back we noticed these new hardy Peaches, which had been introduced from China by the Horticultural Society. They have bloomed most beautifully this season, and are a most valuable acquisition to our spring-blooming shrubs, &c. They are highly deserving a place near every mansion and villa. When they become the size of our Almonds they will be the admiration of every beholder. It is stated that the Chinese have a good collection of other kinds, of different colours.

BIGNONIA CHERERE.—Observing it stated, at page 152, that to make this plant flower, "it must be grown with plenty of bottom heat," I beg to say that for some years it has flourished in great luxuriance, and blossomed finely, planted in a narrow side border of my conservatory. The roots have plenty of "space to run in," but there is no bottom heat, and the plant is on the coolest side of the house. I have no doubt it would do well in a moderately-warm greenhouse, if planted so that the roots could run in a border, or in well-drained soil under the floor: and whether for a greenhouse or a conservatory, or in whatever situation it will flourish, I do not know a climbing plant more worthy of cultivation, combining as it does a remarkably fine, deep-green foliage, with beautiful flower-buds and rich glowing-red flowers.—*Halesleigh (Gardeners' Chronicle)*.

BEST WINTER-BLOOMING ERICAS.—Having small flowers, and bloom most profusely. *E. persoluta alba*, white; *persoluta rubra*, red; *floribunda*, pink; *gracilis autumnalis*, red; *regerminans*, red; *regerminans alba*, white; *gracilis vernalis*, red; *Caffra*, white.

The following have larger flowers: *E. Linnæoides superba*, purple and white; *Wilmoreana*, pink and white; *cerinthoides coronata*, and *superba*, scarlet; *hyemalis*, purplish-red and white.

Young plants should be procured in spring, and a season's growth prepares them for the next winter's bloom.—*An Amateur Cultivator*.

UNIV. OF
CALIFORNIA



1. *Myrtus communis* flore pleno rubic
 2, 3, 4, 5 & 6. *Chrysanthemum indicum* minimum, Hybrid varieties



"WALK out beneath the roseate skies ;
 Eye, ear, and heart awake ;
 List to the melodies that rise
 From tree, from bush and brake.
 Each fluttering leaf, each murmuring spring,
 The great I AM doth own,
 To Him the soaring sky-larks sing
 In music's sweetest tone.
 Canst thou not sing? Oh! leave thy cares
 And follies; go thy way ;
 Let morning praises, morning prayers,
 Go with thee through the day."—BARTON.

MYRTUS COMMUNIS FLORE PLENO RUBRA.

A COLOURED engraving of this beautiful variety of Myrtle has been forwarded to us by Herr Schnieke, of Berlin, in Prussia. In the remarks upon it, he observes it is as hardy, and grows and blossoms as freely as the common species.

MYRTLE.—Ancient writers record that it was so named from Myrsine, an Athenian damsel, and favourite of Minerva, who, on account of its beauty, held it sacred to Venus, as the Olive to Minerva, the Poplar to Hercules, the Ivy and the Vine to Bacchus, the Hyacinth and the Bay to Apollo, &c. *Myrtle*, too, was the symbol of authority for magistrates at Athens: bloodless victors were crowned with *Myrtle*; and hence the swords of Harmodius and Aristogiton were wreathed with *Myrtle* when they set forth to free their country from hereditary monarchy.

Thomson the poet compares a young beauty growing up in retirement to a *Myrtle* among the Apennine Mountains:

"Thoughtless of beauty, she was beauty's self,
 Recluse amid the close embowering woods :
 As in the hollow breast of Apennine,
 Beneath the shelter of encircling hills,
 A myrtle rises, far from human eye,
 And breathes its balmy fragrance o'er the wild"

In Cornwall and Devonshire, Myrtles flourish all the year round in the open air, and there are hedges of a considerable height, strong and healthy. Mr. Keppel Craven describes the hedges in Naples to be as commonly composed of Myrtles and Orange-trees as ours are of Thorn and Privet: their fragrance, too, when in blossom, far surpassing our own Hawthorn. The MYRTLE is designated "the perfection of neatness and elegance, whose leaf and flower are alike worthy of each other."

1. CHRYSANTHEMUM INDICUM MINIMUM.

Dwarf Chinese varieties.—No. 2. ARIADNE (Pertuze's), very double, in profusion. No. 3. QUASIMOD (Lebois), profuse bloomer, and has a charming appearance. No. 4. ALVEOLIFLORUM (Lebois's), a superb formed *Anemone* flowered, very distinct and beautiful. No. 5. PRESIDENT DECUISNE (Lebois's), an admirable blooming variety, very elegant. No. 6. DAME BLANCHE (Lebois), a snow-white, with the edges of the petals fringed like the *Camellia fimbriata*, and the flowers are neatly imbricated.

All the varieties are pretty additions to this very interesting class of Chrysanthemums, and they merit a place in every collection. There are a number of other beautifully distinct varieties also offered for sale for the first time this season. We have seen flowers of several of these, and can highly recommend them. The raisers highly merit the thanks of all lovers of these superb autumn and winter blooming plants.

NOTES ON NEW OR RARE PLANTS.

BERBERIS NEPALENSIS.—An East Indian half-hardy evergreen shrub. It has stood out in the garden of the Horticultural Society at Chiswick during the last winter without sustaining any injury. It is understood to prefer sheltered nooks in the Himalayas, and in such places only to display its beauty. The leaves are pinnated, large, when full-grown have five pairs and the end odd one. Each leaflet is edged with spines. The flowers are borne in compact, erect racemes, of a rich bright yellow, very pretty. It is a fine species, which has been first obtained in this country at the Royal Gardens of Kew. (Figured in *Paxton's Flower Garden*, 79.)

BILBERGIA POLYSTACHYA.—A native of Brazil, an evergreen hot-house perennial, belonging to the Pine-apple order of plants. The flowers are produced in a large conical-shaped spike, the bracts being of a crimson-red, and the corollas of a blue colour. Very pretty. (Figured in *Paxton's Flower Garden*, 80.)

CENTROSOLENIA GLABRA. Of the order of Gesnerias.—A small prostrate epiphytal plant, having white flowers about the size of the *Achimenes coccinea*. From the West Indies. Is in the Royal Gardens at Kew.

CERASUS ILLICIFOLIA.—A hardy evergreen Bird Cherry, which has Holly-like leaves, with a profusion of flowers in racemes similar to the common Bird Cherry. This valuable evergreen was discovered in California, and merits a place in every pleasure-ground.

CŒLOGYNE CUMINGII.—An orchid introduced by Mr. Cuming from Singapore, and first flowered in the stove at Messrs. Loddiges. It is also in the Royal Gardens of Kew. The scape of blossoms rises about nine inches high, each raceme having from three to five flowers. Sepals and petals pure white; lip white or cream-coloured, stained with orange. A blossom is about two and a half inches across. (Figured in *Bot. Mag.*, 4645.)

DEUTZIA GRACILIS.—This valuable shrub grows very freely, forming a nice bush, and blooms most profusely, almost covering the plant with its pure white flowers. It is perfectly hardy, and one or more of it ought to be in every shrub-bed or border. It not only thus flourishes outdoors, but is an excellent pot plant for the greenhouse, where it produces a pretty effect. It is a charming plant for forcing, and a valuable winter or early spring plant when forced. By stopping the principal leading shoots, the plant may be formed to any shape or size without injury to its blooming profusely. Standards have been formed at various heights, grafting it upon stout prepared stocks of the large *Syringa*, *Philadelphus grandiflorus*; the graceful hanging shoots clothed with its lily-white flowers producing a pretty effect.

FANCY GERANIUMS.—*Perpetual* (Ambrose's), upper petals deep purple, with a rich crimson blotch and light margin; lower petals bluish, each having a very distinct spot of purple-crimson.

Superba (Ambrose's), dark crimson upper petals, edged with pink; lower petals bluish, with dark markings. Superb form.

Triumphant (Gaines's), upper petals, crimson belted with white; lower petals, crimson edged with white, and centre pure white. Very superb.

GERANIUMS.—*Ingram's Princess Alice* is a profuse bloomer, flowers a bright rosy-pink with a white centre, and a good sized truss.

Lilliputian, a neat, very dwarf, and free blooming scarlet flowering variety. An interesting and beautiful acquisition, admirable for the front of a bed, or vase, &c.

Dazzle, brilliant scarlet, with a white eye, and a dark horse-shoe marked foliage.

Commander-in-Chief, flowers of fine orange-scarlet, with handsome marked foliage, and large trusses of flowers; free bloomer.

Beauty of the Parterre, flowers a bright salmon colour, and the foliage handsomely marked. The plant is of compact growth, and a free bloomer.

Cerise Unique, flowers a bright cherry colour, compact, and free bloomer, good for pot culture as well as bedding.

Having Sweet-scented Foliage.

Exquisite, flowers blush-lilac with pencilled spots, free bloomer.

Delicatissimum, a very fragrant, free bloomer, flowers white with a purple blotch on upper petals.

Fairy, blush-lilac with a mulberry spot, neat habit, and free bloomer.

Pauline, white, with a rich purple spot.

Innocenza, flesh colour, with a pencilled cherry spot.

HYPOXIS ROOPERII.—Captain Rooper discovered this pretty greenhouse perennial plant growing near the mouth of the Buffalo River, in Kaffraria. It is somewhat like the Star of Bethlehem, and the flower-scape rises a foot high, bearing from four to six blossoms, star-shaped, of a bright yellow colour. Each flower is about an inch and a half across. It flourishes in the greenhouse or pit frame. (Figured in *Magazine of Botany*.)

JASMINUM NUDIFLORUM.—Many of our readers possess this very beautiful twiggy shrub, and it is well worth a place in every garden. It grows from four to eight feet high, perfectly hardy, and may be grown in the open ground as a bush, or (which is best) be trained to a wall or trellis. It begins to flower often as early as December, and continues to May. It blooms very freely when properly treated, each flower being about an inch and a half across, of a rich yellow colour. They are produced in spikes, and are very ornamental, more especially so, appearing in winter and early spring. It is a desirable plant to be grown near the dwelling-house. Like other Jasmines it grows freely, and is easily increased.

It is a native of China; Mr. Fortune found it cultivated generally in the gardens and nurseries in the north of China. (Figured in *Bot. Mag.*, 4649.)

LIMATODES ROSEA.—A terrestrial orchid, discovered by Mr. Lobb near Moulmein, in the East Indies. The flowers are in form very similar to the Bletia (*Limodorum* of some); they are produced in similar formed scapes, of a smaller stature. The one figured is about ten inches long, erect, and has thirteen flowers upon it. Sepals and petals of a deep rose colour. The tubular part of the labellum is of a pale yellow outside, whitish within, and around the mouth is a red ring; lip oblong, rose-coloured. The plant blooms very freely, and has a beautiful appearance. It has bloomed in Messrs. Veitch's nursery. (Figured in *Paxton's Flower Garden*, 81.)

NYPHÆA GIGANTEA. **GIGANTIC WATER-LILY.**—In 1851 Sir W. J. Hooker received specimens of a magnificent new *Nymphæa* from Mr. Bidwell, gathered in the Wide Bay district of Northern Australia, some of whose flowers certainly vie with the ordinary ones of *Victoria Regia*, being a foot across, and of a beautiful blue colour. The leaves are from eighteen inches to two feet across. The flower has numerous

petals (the one figured has fifty-two), with a dense mass of deep golden-coloured stamens, forming a striking centre to the blue petals. Sir William received a tuber from Mr. Bidwell, but unfortunately dry and dead on its arrival.

No doubt others will be obtained, and we may soon expect to see in the Royal Gardens this very magnificent Water-lily. (Figured in *Bot. Mag.*, 4648.)

PASSIFLORA ALATA SUPERBA.—The flowers of the original species are very beautiful, but those of *this variety* are even handsomer, and the plant blooms much more profusely. The outer series of the segments of the corolla or sepals are green outwardly, and of an ochreous-carmine within; the inner series of segments or petals are, outside, of a rosy-crimson, tipped with greyish-blue, and on the inner surface deep carmine. The crown of filaments are purple barred below crosswise with white, and in the upper parts mottled with purple and white. It is a hothouse, climbing, shrubby plant, and is one of the most beautiful. Each blossom is three inches across. It merits a place in every stove, or warm greenhouse, &c. If the roots have the warmth of a bark bed, or otherwise so assisted, it greatly contributes to the successful growth and blooming of the plant. All Passifloras flourish in the following compost: Two parts turfy loam, one of turfy peat, and one of well decomposed leaf-mould, adding to the above materials some gritty sand and a liberal sprinkling of *bits* of charcoal. A free drainage, whether grown in a pot or in a bed, is essential. (Figured in *Magazine of Botany*.)

PHRYNIUM SANGUINEUM. (Synonyme, *Maranta sanguinea*.)—It is of the order of *Canna*'s. The flowers are produced in a compact terminating, branching panicle, the flower-stem rising a foot high. The red flowers have a pretty appearance, and the leaves, which are green on the upper side, are of a deep purple beneath. It is a handsome stove plant. (Figured in *Bot. Mag.*, 4646.)

PORTULACCA THELLUSONIA, LEYSZII.—The flowers are like the species in colour, viz., a bright carmine, but this variety has double flowers. It is an annual plant, obtained by M. Leysz, of Nancy, and a valuable acquisition.

RHODODENDRON CILIATUM, VAR. ROSEO-ALBUM. FRINGE-LEAVED ROSE, WHITE VARIETY.—This very beautiful variety has been raised in the Royal Gardens of Kew. *Nearly two years* ago seeds of the Sikkim-Himalayan Rhododendrons were received from Dr. Hooker, and already (March 7, 1852) six of the seedlings raised at Kew have produced flowers, while the plants are only seven inches high, and many others are showing blossoms. In its native country the *R. ciliatum* only attains the height of about two feet. The flowers of the present variety are bell-shaped, each two inches long, and about three across the front of the blossom, of a delicate white tinged with rose. Very handsome, borne in large terminal heads. (Figured in *Bot. Mag.*, 4648.)

SWAINSONIA OSBORNII.—A native of Australia, from whence seeds were received by Messrs. Osborne, of Fulham Nursery, where it bloomed last year. It has been kept during winter plunged under shelter along with hardy herbaceous plants, and it appears will be quite hardy. It is a woody, herbaceous, branching, erect plant, of dwarf habit, and blooms very freely. The numerous pretty pea-formed blossoms are first of a deep rose, shading off to purple. They are borne in racemes, each having from eight to ten flowers. A single blossom is three-quarters of an inch across. (Figured in *Magazine of Botany*.)

TREATMENT OF THE GENUS AMARYLLIS.

BY J. R. SANTON, SIDCUP GREEN, KENT.

BEFORE I explain my mode of culture, I beg to quote the opinion of the late Mr. Knight, on the growth of bulbous plants in general. He says, "Bulbous roots increase in size, and proceed in acquiring powers to produce blossoms, only during the periods in which they have leaves, and in which such leaves are exposed to light, and these organs always operate most efficiently when they are young and have just attained their full growth." Bearing these important facts in mind, we will suppose a moderate collection is already in hand, and the object to be attained is to induce the bulbs to bloom in the autumn months. In the first place, they should be potted in December, using pots in proportion to the size of the bulbs. The soil I have found best suited for their growth is composed of two-thirds light turfy loam and one-third of half-rotten leaves and coarse river sand, draining the pots well, and using the compost in as rough a state as possible; if additional stimulus is required, it may be supplied when the leaves are fully formed in the shape of manure-water, every second or third watering. In potting them, observe to keep two-thirds of the bulb above the earth in the pot, not omitting to drain the pots well. They should now be plunged in a pit or frame, near the glass, and where there is a moderate bottom heat, to encourage the bulbs to root freely before they commence growing by the leaf; and to accomplish this, the bottom heat should be considerably in advance of the top. When it is found that the roots have made considerable progress towards filling the pots, they should be removed to a light house, and be placed as near the glass as circumstances will admit; the temperature of this house should be kept between 60° and 75°. The increase of both light and heat will cause the bulbs to grow rapidly, and great care should be taken not to injure the foliage; if any blooms appear they must be removed, and water supplied when requisite. By this treatment the plants will in a short time possess a strong and healthy foliage, at which time manure-water may be safely applied with the best effects. Whenever the appearance of the leaves indicate suspension of growth, water should gradually be withheld, but they must still be exposed to the utmost amount of light and heat until the leaves become of a partially brown or yellow colour, when they may be removed to a dry cool place until wanted for blooming. By the above treatment

they will generally be in a perfectly ripened state by the end of April or early in May.

I do not agree with those who advise that during the period of the plant's rest they may be shaken completely out of their pots, for they bloom stronger by being allowed to remain in the pots in which they grow. It will be seen that the roots, if taken proper care of, keep fresh and vigorous during their rest, and shaking them out would greatly weaken their after-flowering; it is not material where they are kept during their repose, provided they are kept dry. Towards the end of August preparations may be made by commencing with all or part of the stock. The roots should be well soaked with water, and then plunged in a mild bottom heat in any pit or frame that may be at work. When the flower-stems have advanced six or seven inches in height, the plants may be removed to a stove to open their flowers, and afterwards placed either as ornaments for the conservatory, or turned out into vases or ornamental pots for decorating the drawing-room, where the nobleness of their flowers and elegance of habit make them suitable decorations. By the above management I have found those enumerated below bloom quite as strong as they usually do in the spring. *Johnsoni*, *Reginæ*, *Vittata*, *Reticulata*, and their allies, frequently have three or four spikes of bloom, and attain the height of from three to five feet. Immediately after they have done blooming they should be partially shaken out, disturbing the roots as little as possible, and repotted as before advised, placing them in a bottom heat until the roots have taken hold of the soil, and then is to be pursued a similar course of treatment as before recommended. In conclusion, I beg to add that few flowers will better repay the little extra trouble their successful cultivation requires than the *Amaryllis*, and that none is susceptible of greater improvement. Their cultivation appears to have retrograded of late years, and this genus has, I think, unjustly been thrown into the shade by more favoured races; still I hope some spirited cultivators will again bring them into public estimation, and place them in company with the present more esteemed showy flowering plants.

List of kinds to bloom in the Autumn.

<i>Amaryllis Johnsoni.</i>	<i>Amaryllis insignis.</i>
„ <i>Johnsoni reginæ.</i>	„ <i>picta.</i>
„ <i>reginæ.</i>	„ <i>Solandiflora vittata.</i>
„ <i>reticulata.</i>	„ <i>Sweetii.</i>
„ <i>vittata.</i>	„ <i>marginata conspicua.</i>
„ <i>acramanni.</i>	„ <i>nobilis.</i>
„ <i>concinna.</i>	„ <i>marginata venusta.</i>
„ <i>grandis.</i>	„ <i>aulica.</i>

And several other hybrids.

EPIPHYLLUM TRUNCATUM.

THIS very showy, beautiful flowering plant, formerly known as *Cactus truncatus*, certainly merits universal cultivation, and ought to have a place in every stove, greenhouse, conservatory, or dwelling-room. By proper treatment it will flourish in each habitation above named.

In addition to the original species there are several varieties of great beauty ; two, viz., the lilac-coloured and the violet-coloured, are very distinct, and produce a striking effect with the bright red and crimson colours : and when in profuse bloom, what plant of its size is equal to it as an ornamental bloomer ? The flowers produce a very conspicuous display among the cut specimens exhibited in the London floral marts. The general growers for those places do not attend to making the plant appear to the best advantage ; of course their object is to obtain the most flowers in the least space, and at the least cost. But in private establishments, the aim should be to have the plant produce the finest effect, and when a good specimen plant of it, under judicious management, is to be seen in the month of November, whether its elegance of form, or the colour, beauty, and abundance of its flowers be regarded, there is scarcely any plant to be found better adapted for decorative purposes. Having lived at a place where this plant was extensively grown, both in a dwarf and a standard form, I may be allowed to say, that grafting and after-culture is so easily managed as to require no particular notice. The stocks employed for the purpose were *Pereskia Bleo* and *Cereus speciosissimus* ; the latter I consider the more preferable, and, if it is about three feet high, with the grafts inserted all around, at a regular distance apart, to within six inches of the pot, and grown in a conical shape, it will be found to have a most pleasing effect. The disadvantage attending the *Pereskia* stock is, after the plant has formed a good head, which will be in the course of four or five years, I have found the stock incapable of transmitting a sufficient supply of nutriment to its graft, which fact has been fully verified by the emission of roots from the young shoots of the *Epiphyllum*. If the woods be properly ripened in the autumn by exposure to the sun and a limited supply of water, they will flower well, and will bear to be forced or retarded, so as to keep up a succession for a length of time during the winter months.

TREATMENT OF IPOMŒA HORSFALLII.

BY AN AMATEUR GROWER.

IPOMŒA HORSFALLII is certainly one of the most magnificent climbers we possess ; for this, a stove is indispensable ; indeed, the roof of a house devoted to *Orchidaceæ* seems its most natural place, and in this situation I have it, and it is one of the most beautiful objects when in bloom. It requires a rich loam of an open texture, and does best planted in the border of the house. The earth about the roots of plants so placed should be renewed every season with loam and well-rotted manure, perfectly incorporated. It will, however, succeed in a pot. The plant should be allowed to have a *good rest* in the winter months, at which time it should be pruned back pretty close. It will begin to push new shoots in April ; these must be carefully tied in their respective places, or by pushing against the glass they are frequently broken ; all superfluous shoots should be removed ; in short, the knife should be freely used during the whole of the growing season. By the

end of June it will begin to produce its rich dark crimson blossoms, when it must be shaded from the sun, or the flowers lose their brilliancy, and their duration is materially shortened. It is propagated, though with some difficulty, by cuttings. The easiest mode is by grafting on stocks of *I. insignis*. To increase it by cuttings, choose young wood, pretty firm at the base; take them off when about three inches long; square the bottom end, without shortening or cutting more of the leaves off than can be avoided; pot them in fine silver-sand, and cover them with a bell or hand-glass; this must be wiped every day: they require a brisk bottom heat. The method of grafting is a curious operation; it is done by cutting off a strong root of *I. insignis*, and a growing shoot of the plant under consideration, and joining them together with a *cleft graft*; this must be done neatly: plunge them in brisk bottom heat, cover them with a hand-light, and keep them constantly shaded. They require, with the same attention as for cuttings, about a month to unite, when they may be hardened off, and subjected to the same treatment as for mature plants.

CULTURE OF PELARGONIUMS, TO HAVE THEM IN BLOOM THROUGHOUT THE WINTER SEASON.

BY THOMAS CLARK, OF WINNERLY GARDENS, HANTS.

THE great improvement effected in this tribe of flowering plants has not only extended to a superior form of blossom, but we now have many varieties, both of the general show Pelargoniums as well as in the fancy and the scarlet-flowering sections, that far exceed any of the older race in a profusion of bloom, as well as in the various rich colourings. Another particular peculiarity is, we have a fine race now that, by proper culture, will bloom from the beginning of October till the end of April, or later. The fine-blooming specimens that are to be seen at Covent Garden Market, London, during the winter season, affords proof that it can be done. Gaines' King, Admiral Napier, and Alba-multiflora, are generally to be seen there in abundance, either plants or cut flowers. But these, and many others, may be had in bloom throughout the year, by due attention in successive operation with them; pruning, potting, and taking into the house, &c., the same varieties at various periods. To have any desirable kinds in bloom through winter, in the first week in May put in cuttings to strike, placing them in moist heat. As soon as they are rooted, pot them into 60-sized pots, and replace them in the frame for a week, to assist them in striking root afresh. At the end of that time, remove them to a cool frame, or a sheltered place, where they can have plenty of air, without being exposed to strong winds. By this means the plants will get stout and bushy. The pots should be placed upon coal-ashes, an inch or two deep, in order to prevent worms getting into the pots. The second week in August, repot the plants into 48's. If any flower-buds appear during this month, cut or pinch them off, but do not shorten the points of the shoots; for if this be done at any time

after the middle of June, the plants will not bloom the following winter.

By the above mode of culture, the greenhouse may be had quite gay with flowering Pelargoniums throughout winter, especially so with the new scarlet race.

About the end of April, cut down those plants which bloomed in winter, and place them in a cool frame; by this means space will be given for those that are to bloom in summer. As soon as the plants begin to push shoots, repot those that require it, and set them out in the open air, on a floor of coal-ashes; the plants will then flower in August and September.

Cuttings should be struck every year, and cast away, by planting out in open borders, &c., all the old plants.

Attentively adopt the above method of culture at successive times, and you may have Pelargoniums in flower every month in the year. I am ready to admit that the blossoms are not equally fine at every season; they are, of course, finest during the summer period.

THE FLOWER GARDEN: ON THE PRINCIPLES OF GROUPING COLOURS.

BY H. BOCK, HAWTHORN GROVE, DORCHESTER.

“A garden is a work of art, using the materials of nature.”

THE grand object to be attained in the formation of a flower garden, is to produce something that shall be pleasing to the mind, and therefore it must be beautiful and interesting. Its interest may consist in the variety and number of sorts of plants it contains; the individual beauty of each; their associations, their relations and affinities to each other; their progressive growth and ultimate maturity; and above all, their capabilities of adaptation to the desired end.

The principles of beauty have been defined to consist of utility, interest, and unity; these principles include convenience, order, neatness, and everything that conduces to the purpose intended.

To accord with the principles of utility and interest, each of the materials employed in any composition must show clearly its adaptation to the end in view; for however pleasing and beautiful a thing may be in itself, if placed in a position, or used for a purpose to which it is unsuited, it loses that admiration to which its qualities might otherwise have entitled it. In a flower garden, these principles may be applied alike to the beds, plants, and ornaments; for a bed, which in an appropriate situation would excite a feeling of pleasure in the mind, if placed where it was unsuited, would, on the contrary, tend to produce pity and disgust; and the same of plants, whether in respect to size, colour, or qualities; while in regard to ornaments, instances of bad taste in the employment of statues, vases, fountains, &c., are far too common; and we may not unfrequently see a Cupid squirting water from his mouth in the midst of a basin, or a Diana going a hunting among flower beds.

Unity.—The first principles in all combinations, whether in lines, forms, colours, or sounds, is that of producing a whole. “Congruity

of style, or a proper adaptation of the several parts to the whole, uniformity of character and harmony of parts with the whole," says Rep-ton, "are different modes of expressing that unity, without which no composition can be perfect. Now the eye can only see, or the ear hear, one thing at a time. The object seen, or the sound heard, may be composed of various minor objects or sounds, but they must all be united or blended together in such a manner as to be seen or heard at one time, as one object, or as one sound, in order to produce an agreeable effect:" for

"Whate'er its essence, or whate'er its name,
Whate'er its modes, 'tis still in all the same;
'Tis just congruity of parts combined,
Must please the sense, and satisfy the mind."

Every composition ought to consist of three parts, in which the central part ought to be the leading or predominating feature, and to which the others ought to be subservient; while, at the same time, the two sides must bear a certain balance or proportion to each other, in order to render the whole symmetrical and satisfactory to the mind.

Contrast and variety are also great elements in beauty, and may be displayed in the size and shape of the beds, and in the height, colours, and habits of the plants. At the same time, due harmony must prevail, so that violence is not done to the principles of unity and symmetry, by making some of the beds very large, and the rest very small; or by placing tall plants in small beds, and *vice versâ*; but the size of the beds should decrease in gradation from the largest to the smallest, and the height of the plants must be in proportion to the size of the beds. Their general dimensions, also, should bear a due proportion to the size of the whole, so that we may not produce a large garden composed of a great number of very small beds, or a small garden composed of beds of a large size. And moreover, the whole garden should not only be in harmony in all its parts, but should also harmonize with the surrounding scenery; and as a flower garden is confessedly an artificial object, while no attempt should be made to conceal or disguise its artificial character, but, on the contrary, its distinctiveness or individuality ought to be maintained, it therefore becomes necessary, when placed amid natural scenery, that, in order to make the artificial harmonize with the natural, the transition from the regular lines and forms, and gardenesque appearance of the one, to the irregular lines and forms, and picturesque appearance of the other, should not be sudden or abrupt, but should intermix with, or gradually melt into each other, so that no definite mark may exist where the one ends and the other begins.

To proceed with the arrangement of colours. It is found that in nature there are only *three* original or primary colours, red, blue, and yellow. From the union or mixture of these three, in pairs, all other colours or tints are produced. Thus, yellow and blue produce green, red and yellow produce orange, red and blue produce purple; and by varying the mixture and degree of intensity of each, all other colours or tints may be produced at pleasure.

It being the case that when certain colours are placed in juxtapo-

sition, the brilliancy of each is impaired, and a disagreeable or discordant effect is produced; while on the contrary, when certain others are brought in contact, the brilliancy of each is heightened, and a pleasurable effect is produced in the mind by the harmony or concord which is found to exist, precisely as in the case of chords in music. It has been satisfactorily demonstrated, especially by Chevreul, that it is the opposite or complementary colours, which, when placed together, produce harmony, and thus we have at once a principle for our guidance; and as I believe it will be admitted that in flower gardening it is to the greatest brilliancy that we ought to aim, it follows that we should bring only those colours together which afford the greatest contrast with each other, and not as some have recommended, those that will subdue each other's brightness; for however necessary this may be in dress or interior decorations, I cannot imagine a case in flower gardening where the *slightest* necessity exists for its practice.

The following is a simple method of finding the opposite colour of any other we may wish to employ:—Form any number of concentric circles, divide the first into three parts, the second into six, the third into twelve, and so on indefinitely; then in the first, place the three primary colours, red, blue, and yellow, and the same in the adjoining spaces in the second circle; in the alternate spaces of the second, place the mixtures as above mentioned, which will then contain red, purple, blue, green, yellow, orange, and it will be found that red is opposite to green, purple to yellow, and blue to orange; by continuing the same process through another circle, we shall have twelve different shades of colour, and so on indefinitely.

It may here be mentioned that, in gardening, *white* is substituted for green, for which it answers the purpose even better, for white being merely the absence of colour, it may be used to separate any two discordant colours.

In applying these principles to the grouping of colours in flower gardens, we first attend to the ground upon which they are to be laid down; that is, whether on turf or on gravel, and if on the former, which is what is called a cold colour, the warm tints, reds and yellows, ought to prevail, in order to be more effective by the contrast; but if on gravel, which is itself of a warm colour, blues and greens should predominate.

In a linear arrangement the following may be the order of succession:—Red, white, blue, orange, purple, yellow, rose, white, pale blue, orange scarlet, indigo, straw or lemon colour, maroon or claret white, scarlet, &c. In a circular arrangement, with a central bed surrounded by others, we may take any colour for the centre, and in the others, place those colours which afford the greatest contrast; for instance, supposing a group of five surrounding a white centre, they may be scarlet, blue, orange, rose, and purple; with the centre blue, those surrounding may be orange, white, scarlet, yellow, rose; with a yellow centre, the others may be purple, pink, blue, white, red; the centre red, the others may be purple, yellow, blue, orange, white, and so on. Another method of grouping produces a good effect, where the surrounding masses are all of the same colour, with the complementary

colour in the centre; and also in single beds, where the margin and the centre are respectively of contrasted colours, as yellow margined with purple, or the contrary, *red* with white, &c. Another method sometimes adopted for large beds is to have zones of various colours, and supposing the centre to be *white*, the first zone may be scarlet, second purple, third yellow, fourth blue, fifth orange, &c.; always taking care to finish with a warm colour if the bed is on turf, and a cold colour if on gravel.

In a geometrical flower garden it is, of course, impossible so to make the arrangement but that some colours, other than contrasted, shall be in contiguity; all that we can do, therefore, is to take care that each bed shall have at least *one* other of its complementary colour in contact with it; and when we are under the necessity of repeating the same, or discordant colours, if we use alternately dark and light tints, the ill effect will be in great part counteracted; and in this way we may arrange varieties of the same genus, as dahlias or verbenas, in which the whole of the primary colours do not occur.

In selecting plants for flower gardening purposes, three qualities must be sought for, viz., the time of flowering, the height, and colour; and even with our great increased resources, it is a matter of no slight difficulty to provide a sufficiency of sorts containing the desired requisites for the different seasons of the year.

In proportioning the height of plants to the size of the beds, the following rule appears to be tolerably correct:—That the plants ought not to exceed six inches in height in a bed eighteen inches wide, nor increase more than six inches for every foot that the beds increase in width.

The best time to determine upon future arrangements is when the plants are in flower; as we can then observe the suitability of each sort, and the effect of different combinations, as also be enabled to judge of the effect of alterations, either in heights or colours, and by making notes, and sketching out rules for our future guidance, and at the same time availing ourselves of every new variety or species that may be suitable, we may then be enabled to progress in improvement from year to year, without limitation.—*Hovey's Magazine*.

NEW SCARLET GERANIUMS.

Few plants are so admirably adapted for bedding out, or planting in masses in the border, as the Scarlet Geraniums. They flower profusely from June until checked by the frost; and the brilliant effect which they produce is scarcely equalled by any other plants. Until within a year or two, however, the kinds have been tall or rambling growers, and less suited, from their gross habit, to some situations in which they have been planted than the Verbenas. But this objection has been overcome; through the efforts of cultivators, a class of plants has been produced from the old sorts, not only of a dwarf and compact habit, and much more profuse flowering, but the colours have been varied in tints, now ranging from *white* to the most fiery scarlet; and besides

this, an additional charm has been given them in the texture, size, and colouring of the foliage; some being of various shades of clear green, others green with brownish tints, while others have still an emerald ground deeply edged with white.

CULTURE OF FUCHSIA SERRATIFOLIA.

BY AN ARDENT AMATEUR GROWER, MIDDLESEX.

THE entire family of Fuchsias are highly interesting and beautiful, and the *F. serratifolia* stands, in my opinion, preeminent above all others. Its large flowers, of such a beautiful china-like rosy-pink tube, and rich orange-scarlet corolla, render it peculiarly handsome, and a large plant of it in profuse bloom is especially ornamental. It is additionally valuable in consequence of its blooming throughout *autumn* and *winter*; but by a proper course of management, it may be had in bloom all the year round, a succession of plants being rested, and started into growth at two or three different periods of the year. The plant, it is well known, grows very freely, none easier to manage or propagate, and it blooms profusely. I admit that it is not generally seen to blossom so liberally, but that is the consequence of improper management. I have several large plants which have never failed for the last four years to bloom in profusion, from the bottom of the stem to the top, and some of my plants are six feet high; others are from two to four feet, &c.

The great failure in not blooming this species arises from the fact of its generally going out of bloom on the arrival of spring, which being the period when nearly all other plants begin to push afresh, the growers of it have generally repotted the plants as soon as done blooming, placed it in a warm temperature to promote its growth, and thus kept it in a perpetual growing state. The result is a plant increased in size, abundance of foliage, and but few, if any, flowers are produced at the expected period.

When my plants cease blooming I gradually lessen the supply of water, and in a week or two afterwards they are removed into a cool greenhouse, and placed behind the stage, not under it, where dripping water would fall upon the plants, and only as much water is given as will prevent the soil from becoming as dry as dust. Thus a period of rest is given for about nine or ten weeks, or even more. At this time I turn the plants out of their pots, carefully loosening away the old soil, cutting back any too-extended roots, and then repot in a compost of rich turfy loam two parts, one part of leaf mould, and one of well-rotted dung in a pulverised condition, adding some bits of charcoal and broken bones thereto. A liberal drainage is given. The plants are then placed in the warmest part of the greenhouse, or medium stove, and as soon as they begin to push afresh an increase of water is given, and occasionally liquid manure, so as to encourage the growth all I possibly can. Generally a number of suckers push forth; these I take away, and pot or otherwise as necessary. Also too many side-shoots are usually produced. When this is the case, I thin them so as to leave the plant duly furnished from top to bottom. The plants soon begin to

show bloom, and as before stated, I have a succession, and during the entire year I have one or more in bloom.

Plants repotted in April or May will come into bloom in July or August, and continue till January or February; to have some to succeed them, repot in July. During summer it is serviceable to place the plants out in the open air; the wood becomes more ripened and consolidated.

My plants are trained up to a single stem, and then furnished with side-shoots all their length; so that I have a tree-like trunk, clothed with its branches, and every one terminating with a raceme of noble flowers.

The plant must therefore have a period of rest, then be repotted; it will soon blossom; the new wood must be well ripened and consolidated, and the plant must be kept from frost in winter, and the soil in a dryish condition. Every greenhouse or sitting-room should have one or more of this splendid, beautiful, flowering plant therein.

MISCELLANEOUS SECTION.

HORTICULTURAL SOCIETY, REGENT STREET.—Messrs. Standish and Noble sent small bits of a new Azalea, collected in the north of China by Mr. Fortune, and expected to prove perfectly hardy in this country. It has small, rather blunt leaves, and very small rosy-purple flowers, looking like so many half-inverted bells; so that, independent of its beauty, which is great, it will be exceedingly interesting on account of the form of its blossoms, which are quite distinct in that respect from any Azalea yet introduced. It is expected that a plant of it will be shown at Chiswick in June, when a better opportunity will be afforded of judging of its merits. A Knightian Medal was awarded it. Messrs. Veitch received a similar award for an example of their charming *Dendrobium albc-sanguineum*. It proves to be a free bloomer, and a distinct and fine species. Other novelties, among Orchids, consisted of a small piece of a flower-spike of the lovely *Odontoglossum Pescatorei*, and a bloom of an exceedingly handsome new *Huntleya* from Mr. Mylam, gardener to S. Rucker, Esq. The latter was marked with dark brown in the centre, which was surrounded by a field of pale primrose. A Banksian Medal was awarded it.—Messrs. Henderson sent a new yellow-flowered Indian *Dendrobe*, and a plant of the same genus from Sylhet, apparently *Dendrobium heterocarpum* in a diminutive state, was furnished by Messrs. Jackson, of Kingston.—Mr. Bunney, of Stratford, contributed imported plants, which were flowering for the first time, of *Dendrobium nobile*, or some closely-allied kind, and the charming *D. Farmerii*, with a fine raceme of white and yellow flowers. A Certificate of Merit was awarded for the latter.—From Messrs. Backhouse, of York, came a *Cattleya*, named *amethystina*, but which appeared to be nothing but a variety of *C. intermedia*. A *Thysanotus*, from New South Wales, accompanied it, but in the absence of bright light its flowers did not open. Mr. Blake, gardener to J. H. Schroder, Esq., received a Certificate of

Merit for a flowering plant of *Dendrobium albo-sanguineum*.—Messrs. Loddiges, of Hackney, communicated a collection of Orchids, consisting of a finely-blossomed plant of the Sweet Vanda (*V. suavis*), the deep purple-flowered *Saccolabium ampullaceum*, *Lycaste Skinneri*, the charming *Dendrobium anosmum*, a species in the way of, but handsomer than, *D. macrophyllum*, and wanting the strong rhubarb smell which belongs to the latter; also the lovely *Oncidium bifolium* and two other species; the fragrant *Burlingtonia*; the somewhat scarce *Dendrobium chrysotoxum*; a specimen of *Aerides affine*, with two charming spikes of blossoms; and the cinnabar-coloured *Laelia* (*L. cinnabarina*). A Knightian Medal was awarded.—Messrs. E. G. Henderson, of the Wellington Road Nursery, St. John's Wood, sent a continental *Camellia*, named *Rizzio*, with two blooms on it, exhibiting the familiar sport of one flower being red while the other was white, faintly striped with red. Along with it came two small Orange-trees, in order to show how freely they bloom in pots in a small state. A Certificate of Merit was awarded for the *Camellia*.—A finely-flowered specimen of the handsome *Azalea Iveryana*, white, streaked with bright carmine, fine form, and one of the best varieties, for which a Banksian Medal was awarded, was contributed by Mr. Green, gardener to Sir E. Antrobus, Bart.—Mr. Sommersby, gardener to Major Martyn, sent two dwarf *Hydrangeas* and a white seedling *Petunia*.—From Messrs. Henderson, of Pine-apple Place, came a new and very handsome *Oxylobium*, for which a Banksian Medal was awarded; also a new *Gastrolobium*, the pretty *Boronia tetrandra*, the small-growing free-flowering *Eriostemon scabrum*, and a species of *Acacia*.—Mr. Wood, of Norwood, sent a collection of variegated hardy plants, and a fine specimen of the variety of Cape Heath, called *Hartnelli virens*, for which a Certificate of Merit was awarded.—Messrs. Jackson, of Kingston, sent an interesting group of tender variegated plants, consisting of *Vriesia speciosa* (with two flower-spikes), *Dieffenbachia costata*, *Dracaena terminalis*, the variegated *Croton*, *Achimenes picta*, and a few smaller plants.—R. T. Clarke, Esq., of Wilton-place, Daventry, exhibited cut specimens of a white *Chrysanthemum* in bloom, which proves that this useful autumn flower may be had in blossom at this season, if such should be desired. It had, of course, been forced.—The Garden of the Society furnished the sweet-scented *Rhododendron formosum*, which is also sometimes called *Gibsoni*; *Rhynchospermum jasminoides*, whose white flowers are as fragrant as those of a *Jasmine*; the Californian *Ceanothus rigidus*, most gay with numberless clusters of blue flowers; the scarlet-blossomed Sage (*Salvia gesneriflora*), a brilliant plant at this season; *Trymalium odoratissimum*; and another small white-flowered shrub, called *Discaria crenata*, which, though scarcely better than a bright green bush in general appearance, emits a delightful perfume when the sun shines on it.

PRUNING *ERICA VESTITA*, &c.—I shall be much obliged by an early answer to the following particulars:—

1st. If I may, without fear of losing the plant, cut in a large *Erica vestita* to within about six inches of the pot, in order to form a more bushy plant?

2nd. What can I do to prevent Indian Azaleas growing before they flower, they being in a cool (or cold) room? Also, is any kind more apt to do so than another?

3rd. How can I kill worms in plant pots? If I pour in lime-water, is there not a fear of also killing the plant?—*J. Gledhill.*

1st. All the softer-wooded kinds more readily push after such pruning than the wiry hard-wooded ones. The former are of quick growth, the latter of slow growth. The *E. vestita*, and its varieties, grow quickly, and unless the plants be many years old, they will push freely; but in every instance a portion of each branch must be left; for if only the main stem be retained, it is hazardous as to its pushing. Such kinds as *E. hyemalis*, *Linnaeoides*, *Wilmoreaana*, &c., push as readily after being cut in as an *Heliotrope* does. Such kinds as *E. tricolor*, *Hartnelli*, *aristata*, &c., are more tardy with old plants; young ones will succeed. By nipping off the leads of all the shoots each season, the plants are readily kept bushy for many years. The tribe is easily propagated, and plants may be readily provided as successors. Young bushy ones may be purchased at reasonable prices, in most cases very low; and it is better to have young blooming plants prepared in time to replace those which have become too large. The time of cutting back must be regulated by the period of flowering. Those kinds which bloom "late in autumn" should not be cut in till spring. All that bloom in winter, spring, and autumn, may be pruned as soon as the blossoms fade. At the time of cutting in, do not disturb the ball of soil, but allow the new shoots to push first, and then repot. When the new shoots appear, let the plants have a due proportion of air, or the shoots will be weakly.

2nd. *Azaleas*.—An Article in our next Number shall be given. We suppose your plant has pushed, and the blooming bud not opened. Pinch off the shoots which surround the blossom bud, and the flower will, if not damaged, soon expand.

3rd. Use strong lime-water in a clear, not muddy state, and give sufficient to moisten all the soil; it will either kill, or drive out the worms, and not injure your plant. One application is usually enough, but more may be given if not. When worms are in the soil, it is easy to turn out the ball, and pot it at the side; if the worms are not seen, they soon issue forth, and can be easily dispensed with.

HAMMERSMITH HEARTSEASE SOCIETY'S EXHIBITION was held on May the 12th; and as it is considered the great show for the southern growers of this pretty tribe of flowers, the varieties exhibited may be depended upon as being the very best existing, so that persons desirous of possessing a collection of the best kinds may readily make a selection.

Mr. Edwards has drawn up the following detail in the *Gardener's Chronicle*:—

"We have with much care classified the flowers staged, in order that no difficulty shall exist in obtaining a full knowledge of the several and respective merits of the varieties now in cultivation as show flowers, and of the arrangement which the different exhibitors thought best to adopt. Stands used by dealers for 36 varieties consist of four rows, each containing nine blooms; amateurs 24, are four rows of six blooms;

our enumeration commences at the left hand corner of the back row, which row being completed we continue with the next row below it, left hand end, then again with the third row, concluding with the fourth or front row. We are thus explicit, in order that not only may the colours be readily known, but a knowledge of size be obtained; the back rows being formed of the largest specimens, gradually decreasing as they approach the front. The colours may be known by the following abbreviations:—A, yellow ground varieties; B, white ground varieties; C, yellow selfs; D, white selfs; E, dark selfs. *Amateurs*: 1st prize, Mr. S. Treacher, with Juventa, A; Duke of Perth, E; Queen of England, B; Masterpiece, A; Lady Carrington, B; Pandora, A; Aurora, B; Timour, A; Flower of the day, E; Royal Visit, B; Diadem, A; Duchess of Rutland, B; Lord Carrington, B; Maid of Athens, A; Nimrod, A; Lucy Neal, E; Helen, B; Supreme, A; Constantine, E; Thisbe, A; Almanzor, B; Iron Duke, A; Sambo, E; Kate, B. 2nd. Mr. A. Lane, with President; Climax, B; Pompey, E; Ethelred, A; Royal Visit, B; Ophir, C; Matchless, B; Sir J. Sydney, A; Maid of Athens, B; Disraeli, E; Diadem, A; Queen of England, B; Androcles, A; Mr. Beck, A; Blanche, D; Timour, A; Mrs. Trotter, B; Elgiva, C; Helen, B; Duchess of Rutland, B; Polyphemus, C; Aurora, B; Eustace, A; Exquisite, B; Rubens, A. *Dealers*: 1st, Mr. Turner, with Great Britain, A; Mrs. Hamilton, B; Robert Burns, A; Almanzor, B; Gliff, A; Duke of Perth, E; Lady Emily, A; Euphemia, B; Thisbe, A; Seedling, E; Duke of Norfolk, A; Sir R. Peel, B; Adela, C; Royal Visit, B; Duke of Rutland, B; Miriam, B; Alfred the Great, A; Privateer, A; Sir J. Cathcart, A; National, B; Salt Hill Rival, A; Pompey, D; Sir J. Franklin, A; Sir Joseph Paxton, A; Seedling, B; Diadem, A; Aurora, B; Supreme, A; Sambo, E; Mr. Beck, A; Criterion, B; France Cycole, A; Seedling, C; Seedling, A; Black Diamond, E; Pandora, A. 2nd, Mr. Bragg, with Laertes, A; Queen of England, B; Hercules, E; Lady Carrington, B; Duke of Perth, E; Almanzor, B; Grace Darling, A; Flower of the Day, E; Pandora, A; Aurora, B; Timour, A; Pride, B; Kate, D; Ophir, C; Elegans, A; Mulberry, E; Polyphemus, C; Criterion, B; Constance, A; Royal Visit, B; Constellation, A; Royal Purple, E; Lady Emily, A; Royal White, D; Supreme, A; Rotunda, B; Commander-in-Chief, B; Masterpiece, A; Nox, E; Rubens, A; Rotunda (Hunt's), B; Androcles, A; Lucy Neal, E; Cowper, C; Post Captain, A; Helen, B. First-class certificates were awarded to Fearless (Schofield), A; a flower remarkably smooth, both on surface and edges, colours pure and bright, with well displayed eye; similar, but an admirable improvement on Supreme; Monarch (Turner), A; bold and of good colour. National (Turner), B; a flower peculiar for the extent of ground colour and regularity of the border marking; Sir J. Cathcart (Turner), A, previously described; on this occasion it was in famous condition.



IN THE FLOWER GARDEN.

THE recent fine weather would allow for the planting out in beds, &c., half-hardy as well as the tender annuals, Heliotropes, Pelargoniums, Verbenas, Petunias, Celcias, Zinnias, Stocks, &c. ; but any omissions should be attended to at once.

We have frequently called the attention of our young readers to the desirability of paying strict attention to the judicious arrangements of flowering plants, as regards height and harmony of colouring. It is true that, of late years, this subject has become a matter of study amongst gardeners, and great changes for the better have taken place in this respect ; still we are far from supposing that we have arrived at perfection. Always bear in mind—if beauty, order, and effect are desired—that attention to this, next to a well laid-out flower-garden, is essential to their full development. In producing well-arranged contrasts, the different shades of colour must be as distinct from each other as possible : for instance, white should never be placed in contact with yellow, or deep blue with crimson ; but white forms a good contrast with blue or red, blue to orange, yellow to purple or violet, dark crimson to light blue, and scarlet should be placed near those which have a profuse green foliage, as red and green form the best contrast. Orange and violet do well. Greenish-yellow and rose contrast well.

The only attention now required with such is to water freely, being careful it does not pass off ; tie up, &c. Pinks and Carnations will require due care in securing, and by the middle of the month pipings of Pinks may be taken off, and towards the end layers of some early Carnations be made. Thin away extra flower-buds. Dahlias will require securing, and thin out the shoots, so as only to retain about four or five. Stop the leading stem, to give support to the side ones. Cuttings will soon strike root. If the weather be dry, water daily, a good supply at once : a portion of mulchy manure, spread over the roots, is very beneficial. Seeds of Sweet Williams, Canterbury Bells, Scabious, &c., should now be sown for next year's blooming. Auricula and Polyanthus must be kept in a shady but airy place. Prepare the compost for re-potting in next month. Sow seed as early as ripe. Pansey seed also sow. (See Articles on, &c.)

NEW FLOWERS.—Let attention be given to hybridizing, with a view to obtain improved varieties. Roses : maggots often infest the buds ; carefully examine and destroy. Green-fly, too, stop at first by fumigation, &c. (See Articles on.) Chrysanthemums : young plants should be prepared for the autumn. Violets for next year's blooming, attend to beds of, &c. (See Articles upon.)

IN THE GREENHOUSE, &c.

The greenhouse plants may now be placed out of doors; let them be duly watered, for if allowed to flag the result is the leaves are damaged. Moss sprinkled between the pots keeps the soil cool.

The house will now have to be kept gay and sweet by Balsams, Globe Amaranthus, Cockscombs, Brachycoma, &c. Re-pot as required, to keep the plants in a growing state. Achimenes will now be coming into bloom; they repay for every attention. Cuttings of nearly all greenhouse plants should now be put off: May and June are the best months for that purpose. Cinerarias are highly ornamental, and well worth encouraging. Any done blooming and seed collected, if required, should be turned out of the pots entire into a bed of rich soil, where there is shade from eleven to four o'clock. There they will flourish, and supply an increase for next year's bloom. Cuttings of Roses may be put in, and will soon strike. Camellias that have been forwarded by forcing the shoots and buds, should now be placed in a cooler situation, to give vigour to them. When the grass of Ranunculus or Tulips is quite dead, the roots may be taken up. Pelargoniums, as they go out of bloom, must be prepared for another season. (See Articles on, &c.)

ERICAS.—The early-blooming kinds should be draughted out, and others may follow them as fast as they go out of bloom. Examine the plants very carefully, and see that they are in a proper state as to moisture; and if you are an exhibitor, never put a plant of this or any other kind into a van without previously giving it a good soaking of water. The young plants which are not blooming had best be placed in a pit where they can be exposed or not, as may appear necessary. Stop such as require it boldly back, and train them so as to form a proper foundation for a good specimen. As the principal specimens go out of bloom they may be removed to a shady situation to make their growth, being previously cut in, if necessary. Supports for an awning must be placed over them, so that in case of heavy storms or continued rain, they can be protected a little. Clear weak manure-water may be used occasionally for the free-growing kinds. With regard to ventilation, there is no fear of your over-doing it after this time. Re-pot any requiring it, but do not over-pot; the one-shift system is injurious to nearly all the tribe, the only exceptions are those of rapid growth and robust habit. Rough peat and silver-sand, with bits of stone, &c., and a liberal drainage, are requisites. Epacris, &c., should also be duly attended to in re-potting, &c.

AZALEAS in the forcing-pit must be kept shaded during bright sunshine, and a moist growing atmosphere must be maintained around them. Water freely with weak guano-water, and sprinkle the vacant parts of the house or pit daily, but not upon the bloom. As the plants go out of flower place them in heat, to perfect their wood for next year's blooming. (See Articles on in previous volumes.)

BRIEF REMARKS.

ROYAL BOTANIC SOCIETY, REGENT'S PARK.—*Exhibition held May 19.*—The Pelargoniums were shown in considerable numbers; the following were awarded prizes:—In the *Nurserymen's Class*, 1st, to Mr. Turner, for Magnet, Mochanna, Prince of Orange, Ajax, Chieftain, Chloe, Magnificent, Pride of the Isles, Constance, Rosamond, Little Nell, and Alonzo; 2nd, to Mr. Dobson, Woodlands Nursery, Isleworth, for nice examples of Vanguard, Rosamond, Cuyp, Mont Blanc, Arethusa, Loveliness, Harriett, Glowworm, Incomparable, Delicatissimum, Purpureum, and Exhibitor; 3rd, to Mr. Gaines, Battersea, for Aspasia, Gulielma, Mars, Virgin Queen, Grandiflorum, Salamander, Mont Blanc, Bruno, Rosamond, Cecil, Marquis of Stafford, Nonsuch. *Amateurs*: 1st, to Mr. J. Robinson, Pimlico, for Alderman, Pride of the Isles, Ajax, Norah, Alonzo, Salamander, Coustance, Magnificent, Nonsuch, Star, Conspicuum, and Forget-me-not; 2nd, to Mr. Carragon, gardener to J. E. Lawrence, Esq., Kentish Town, for Prince of Orange, May Queen, Major Domo, Ajax, Mont Blanc, Marion, Gulielma, Alonzo, Rosamond, Ocellatum, Magnificent, and Virgin Queen. Fancies were numerous and in good condition: 1st, to Mr. J. Robinson, for Empress, Madame Meilleux, Queen Superb, Alboni, Fairy Queen, and Hero of Surrey; 2nd, to Mr. Roser, gardener to J. Bradbury, Esq., for Queen Victoria, Ibrahim Pacha, Modestum, Alboni, Formosa, and Madame Meilleux; 3rd, to Mr. Miller, Edgeware-road, for Jehu superb, Duchess d'Aumale, Jenny Lind, Statuiski, Queen Victoria, and Orestes. *Nurserymen*: 1st, to Mr. Turner, for Hero of Surrey, Reine de Français, Minerva, Carlotta Grisi, Fairy Queen, and Empress; 2nd, to Mr. Ambrose, for Princess Maria, Galitzia, Signora Cassaloni, Defiance, Odoratium, Magniflorum, and Fairy Queen; 3rd, to Mr. Westwood, for Empress, Statuiski, Lady Cooper, Magnificum, Reine de Français, and Madame Meilleux. Recommended: Mr. Ayres, Blackheath, for Jenny Lind, Fairy Queen, Duchess d'Aumale, Reine de Français, Formosum, and Statuiski.

GESNERA ZEBRINA.—I have remarked that the Editor has often recommended this plant to the attention of the readers, and referred to the noble flowering specimens in the Kew Gardens. I was first induced to turn my attention to its cultivation from such recommendation, and followed the system of treatment there described, and the success has been most admirable. I have specimens, which have been in bloom from February to the present time, that are four feet high, with several lateral spikes to each, all blooming beautifully. The rich green leaves, elegantly marked with stripes of dark velvet, have a fine appearance, and in contrast with the immense spikes of rich red and orange flowers render the plant highly ornamental; and blooming from January to May, or later, renders them highly valuable; indeed, by resting the tubers at sundry times of the year, potting and starting into growth thus successively—say twice in a year—the plant may be had in bloom the entire of it. I use a compost of one part of rich turfy-loam, one part of turfy-peat, one part of well-rotted vegetable or leaf-mould, and one of old pulverized dry cow-dung, mixed with bits of charcoal, and a sprinkling of charcoal dust, with a little of bone-dust, or bits of crushed bones. I grow them in pans eight inches deep and twenty across, having a free drainage. This plant does not root deep, but spreads its roots extensively around, so that pans are much preferable to deep pots. In some pans I have but a single plant, in others two, three, four, or five, and in all cases they are highly ornamental. The plant is of the easiest culture, giving the tubers a two months' rest after blooming, and growing them in a moist, warm temperature till they commence blooming, when they may be placed in any other warm situation. They push well at first when placed in a hot-bed frame or warm back bed. They are much benefited by frequent syringing overhead and the under side of the foliage; it preserves them from the attack of red-spider, and otherwise promotes their vigorous growth.—*Richard Scott, Claremont Villa, Fulham, Middlesex.*

PRUNING ROSES GROWN IN POTS.—These do not grow so vigorously as when grown in the open ground, and in consequence require all the encouragement which can be given to promote their *uniform vigour*; and, in order to effect this, the branches should be thinned at an early stage of their pushing, cutting clean away all the *weakly* ones; and as it sometimes occurs that a *very gross shoot* will push ahead of all others, and, if retained, will rob the other part of the plant, therefore cut away such, leaving only the *medium* sized, and of those only as many as the plant may be

open, and yet form an acceptable bushy one. By this *spring* or *summer* thinning those retained will derive essential improvement in their vigour, the extra useless ones being cut away. This summer dressing is particularly necessary with China, Hybrid China, Bourbon, and Noisette Roses. And, as they will require a *winter* pruning, all that will *then* be necessary will be to cut back those shoots retained at the summer dressing, leaving from two to four buds only on each shoot.—*An extensive Grower of Roses for Forcing, London.*

TREATMENT OF LESCHENAUTIA FORMOSA.—This very handsome profuse-flowering plant is not generally well grown. I am a traveller, fond of plants, and visit nearly all the celebrated plant establishments in the three kingdoms, as well as attend most of the principal exhibitions in London as well as the country. In no one instance elsewhere have I seen anything like such a specimen as is shown in many instances at the London shows, and which are grown in that neighbourhood. It appears to me that in the country the plants have not suitable pot-room. A celebrated London grower informs me that for this plant he prefers the ONE-SHIFT system. At first he takes a healthy well-furnished plant, which may be in a large 60 or 48-sized pot, and transfers it early in spring into a pot fourteen inches wide at the mouth and about *nine inches* deep; a deeper pot is injurious. The plant, too, requires to be grown *near the glass*; it then grows freely and bushy, and will also bloom in profusion. If far from the glass, it spindles, and becomes weakly and scanty of shoots. A liberal admission of air, too, is necessary, but a cold east or north wind blowing upon it is very injurious. The *trunk-roots* should not be buried deep; rather high is preferable, for if there be a hollow around the main stem, water will lodge there, and the plant will soon and suddenly perish. If the main stem be buried deep by soil, it is proportionately injurious to the plant. Avoiding these evils, and attending to the other recommendations, large, bushy, vigorous, profuse-blooming specimens will soon be formed, and as readily retained. When the plant is in a *growing* condition, it will require a liberal supply of soft-water, and syringing overhead, when not in bloom. The soil is not sifted, but chopped and well broken by the hand. A good turfy *sandy peat*, with a sprinkling of bits of charcoal, brick, or porous stone, is beneficial. A free-blooming, large, healthy plant amply repays for every attention.—*A Traveller.*

NORFOLK ISLAND PINE, AND THE BEAUTIFUL SCENERY OF THE ISLAND.—The following particulars have recently appeared in the publication "Household Words," and as the noble *Pine Tree* which bears its name is a native of the island, the account will be interesting to our readers:—

"The first glimpse of Norfolk Island that one gets from a ship's deck is made remarkable by a tree—well known by means of pictures and descriptions—the grand Norfolk Island Pine, which clothes the hills to their summit.

"Norfolk Island consists of a series of hills and valleys, beautifully interfolded, rising in green ridges one above another, till they all culminate in the summit of Mount Pitt, the highest point in the island, about 3,000 feet above the level of the sea,

"Through a cutting in the ledge of rock which overhangs the sea, I came now upon an amphitheatre of hills. These hills are all richly dressed in a thick clothing of wild shrubs, flowers, and grasper. On one side is a mount covered to the top with the gigantic Norfolk Island Pine; on another side down goes a ravine that seems to offer a short cut to the interior of the earth; a short and a most pleasant cut, for intricate dark foliage is lighted up by lemon groves, where, here and there, the sun is playing on their golden fruit. I descend by the path into the ravine. Foliage shuts me out from the sun; magnificent creepers (for in nature, as in society, there are creepers which take rank as the magnificent) twist and twirl themselves about my path. The birds that perch upon them glitter like their flowers: lories, parrots, parroquets, beautiful wood-pigeons. But the forest is dark, and I ascend again, and get among such quaint aspects of vegetable life as are made by clusters of large Fern trees, rising with a lean—some to this quarter and some to that—trees sadly wanting in uprightness of character, but carrying their crests fifteen or twenty feet above the ground. These look like grass among the Norfolk Island Pines, which pile one dark feather-crown upon another—crown above crown, to a height of some two hundred feet above the soil. From the summit of Mount Pitt, which I have now reached, I have Norfolk Island in complete subjection to one of my senses. I can see it all. Rock, forest, valley, corn-fields, islets, sunshine on sea,

sunshine on birds, no sun in gloomy glades, rays darting into darkness, and revealing parasites and creepers exquisitely coloured, and the bright green fans of the Palmetto rising out of a froth of white *Convolvulus*; Guava and Lemon, a delicious air, clear sky, and the sharp outline of every light feather of the foliage picked out against it. There used to be Oranges, but once upon a time there lived in Norfolk Island a wise commandant, who voted Oranges too great a luxury for convicts, and caused the trees that grew them to be extirpated; they are now, however, being re-introduced. In a garden belonging to the commandant, called Orange Vale, sight, taste, and smell enjoy a paradise. Delicate Cinnamon grows by the rough stout old English Oak. Tea, Coffee, Tobacco, Sugar-cane, Banana, Figs, Arrowroot, and Lemon, grow in company with English fruits and vegetables, that have been forced by the climate into an ecstatic, transcendental state. The spirituality of a Carrot gets to be developed when it grows up in such good company as that of Sweet Bucks and Bananas. Sweet Bucks are sweet Potatoes, which are very kisses to the palate, and are served out daily as rations to the evil and the good, the convicts and the officers. But, truly, there is need of a fine climate to make compensation for the other details of a residence in Norfolk Island."

BLEACHING LEAVES.—Sophia wishes to know how she can bleach Lime-tree leaves, after having dissected them, without injuring the fibres. She will be obliged by some person acquainted with the subject giving her the desired information in the July number of this Magazine.

DIELYTRA SPECTABILIS.—Noticing some remarks by correspondents relative to this plant flourishing in the open ground, I beg to add my testimony thereto. We have a plant two and a half feet high, showing seventeen spikes of flowers and seventy *expanded* blossoms. It was covered during winter with cinder-ashes, but received no other protection whatever. It is on a south-east border, in very coarse and heavy soil, every leaf is free from spot or blemish, and it has never had any support in the way of stakes, &c.—*James Harris, Gardener to T. Ingle, Esq., Wood Hall, near Downham, Norfolk, May 1, 1852.* [This is one of the most beautiful graceful flowering plants, either for in-doors or in the open ground. It should be in every greenhouse, pit-frame, or flower-garden. It makes a charming appearance as a bedding plant. It is easily propagated, treating it as is done in raising Dahlias, by cuttings in spring. Spring-struck plants of the *Dielytra*, being planted out in the open ground or grown in pots, will bloom from July to the end of summer, or later. Plants that were raised the previous year, and either in pots or beds, will come into bloom in-doors in March, and out-doors in April.]

HYDRANGEA JAPONICA VARIEGATA.—In your numbers for March and May of the present year, you describe and recommend this beautiful variety of *Hydrangea*. I was induced to procure a plant, and though I expected to find it have a pretty variegated leaf, I beg to state it very far exceeded my anticipations. It most certainly is the handsomest variegated-leaved plant I ever saw. Its pure white and pretty green—in broad contrasted stripe and edging—is most strikingly beautiful. It merits a place in every greenhouse, and will be admired by all who see it.—*J. P. Harvey, St. John's Wood.*

GAS-TAR APPLIED TO WALKS.—Early last year I noticed in this Magazine a recommendation to pour gas-tar upon garden walks, and subsequently some facts of its successful application have been recorded. The walks in the gardens and grounds under my charge being about three miles in extent, the cost in attempts to keep them free from weeds amounted to a considerable sum per annum, and in wet seasons our utmost exertions could not effect a proper cleaning. The estate is contiguous to a large town where there are three gas companies, so that I had the opportunity of obtaining all I required at an average of one penny per gallon. During the dry months of July and August last year, I had half my walks well cleaned and rolled very even; this being done, I had the gas-tar properly poured over them, so as to have a good bed of it well covering the face of the gravel; and that it might be laid over tolerably equal, I had it stroked over, by means of the back of a rake being drawn over it. This being done by one party of labourers, others immediately followed, and evenly scattered over it as much *fine* gravel as concealed the gas-tar from sight. The following day that portion was rolled evenly, and thus we proceeded till we had completed the extent of near two miles. The edgings are of grass and box; we avoided the gas-tar touching either, so that no injury might be done to them. From the day we finished the portions up to the

present (May 12th, 1852) not a single weed has made its appearance thereon, and the surface has constantly been dry, except whilst rain was falling—and then to walk upon left no impression—and the surface was almost immediately dry when the rain subsided. One of the gas companies had a public pathway on the high-road side coated over with gas-tar and sprinkled over with sand at the time I applied it to my walks, and though tens of thousands walk upon it every day, the surface is as good now as at the first day after its completion.—*J. R. Stuart.*

P.S. The remainder of the walks will be completed this season, and from what I can see of its effects hitherto, the walks will keep in desired condition for very many years.

VERBENA VENESA.—Last year you mentioned that there was a bed of Mangle's variegated Geranium in front of the large conservatory at Kew, which was mixed with this purple-flowered Verbena, and that it had a very pretty appearance. I wish to try it, but cannot procure plants of the Verbena. If I sow seed now, I fear the plants will not bloom in due time this summer. Oblige me by your opinion in the June number.—*Lucy Neale.* [If you raise seedlings now, pot them and encourage their growth, to endure next winter, and, succeeding, the plants will be strong for planting out next year. We think plants of this Verbena may now be obtained at some of the nurseries. We subsequently tried it in contrast with the *Flower of the Day* Geranium, and the contrast of the purple with the much whiter leaves and larger flowers was much more effective and handsomer. No leaves of the Verbena are seen above those of the Geraniums, and the heads of flowers only appearing between the Geraniums produces a striking appearance. Any isolated beds filled with such a mixture of flowers, or with others producing the most striking contrasts, whilst at the same time the plants correspond somewhat nearly in habit, will always be admired, and have a pretty relief from the masses of colour in an harmonized flower-garden composed of beds each of one kind only. The class of bedding plants is now so numerous, that it is easy to make a selection for mixed beds, so as to suit the particular taste of every person. Lists of bedding plants, with their heights, colours, &c., have appeared in previous numbers of this Magazine, which may assist in making desirable selections for such purposes.]

THE HORTICULTURAL SOCIETY'S EXHIBITION.—The first for this season was held on May 12th, in the gardens at Chiswick; and splendid as former collections of plants have been, those on the present occasion very far exceeded them. Such a display of superbly-grown plants, we believe, was never previously brought together in any place or country. We have not space in our present number to give full particulars.

Pelargoniums were more numerous than had been anticipated, and seldom have we seen, even at a June meeting, such plants as those which composed the first collection. They exhibited what is rarely met with in combination, viz., quality with quantity of flower. The plants were large, with foliage in some instances covering a third of the pots. Mr. Turner, twelve varieties in 8-inch pots. The sorts were, Magnet, Mochannum, Pulchrum, Pride of the Isles, Constance, Ajax, Chieftain, Magnificent, Virgin Queen, Rosamond, Gulielma, and Rowena. Magnet was the admiration of everybody. 2nd. Mr. Dobson, Woodlands Nursery, Isleworth, for Chastity, Purpureum, Incomparable, Mont Blanc, Cuyp, Pulchellum, Vanguard, Mulready, Chloe, Arethusa, Rosa, and Rosalind. 3rd. Mr. Gaines, Battersea, with Cecil, Aspasia, Mont Blanc, Salamander, Grandiflorum, Negress, Marquis of Stafford, Flying Dutchman, Mars, Rosamond, Alphonsa and Gulielma.

Six Fancy *Pelargoniums*—*Dealers*: 1st, Mr. Turner, with Hero of Surrey, Fairy Queen, Minerva, Ambrose's Perfection, Statuiski, Reine des Française; 2nd, Mr. Ayres, Blackheath, with Fairy Queen, Reine des Française, Ytolinski, Mirandum, Hero of Surrey, Picturatum; 3rd, Mr. Gaines, with Signor Casoloni, Agnes, Reine des Française, Defiance, Odoraturn, Magniflorum.

Six Fancy *Pelargoniums*—*Amateurs*: 1st, Mr. Kempster, Blackheath, with Statuiski, Bouquet tout fait, Alboni, Formosum, Hero of Surrey, Jenny Lind; 2nd, Mr. Roser, gardener to J. Bradbury Esq., with Modestum, Madame Meillez, Queen Victoria, Ibrahim Pacha, Alboni, Cleopatra.

[*More particulars in our next.*]

THE
OF
THE



Rhododendron ciliatum, var. *roseoalbum*



“THE grasses elegant though not proud robed;
 The mallow, purpling o’er the pleasant sides
 Of path-ways green, mix’d with the helpless *vetch*,
 That climbs for aid. Deceitful *nightshade* dressed
 In hues inviting; every plushy vale,
 Each dry entangled copse, empurpled glows
 With *orchis* blooms; while in the moistened plain
 The *meadow-sweet* its luscious fragrance yields.
 And oh! what odours from the hedge-row breathe
 When the soft shower calls forth the hidden sweets!
 The *clover* richly feeds the stealthful gale;
 The strawberry blushing, hides its modest face
 Beneath the mantling leaves.”

RHODODENDRON CILIATUM, VAR. ROSEO-ALBUM.

THIS very handsome *Rhododendron* is a seedling raised at the Royal Gardens of Kew, where we recently saw it in bloom. It is one of the Sikkim-Himalayan *Rhododendrons*, and is one of a many that have been raised from seeds which Dr. Hooker collected on the Himalaya. The plant is not above nine inches high, and yet produces such fine blossoms. Several others of the seedlings have flowered, and none of them, it is said, fully resemble in colour the beautiful original *R. ciliatum*, from which the seeds were obtained. Sir W. J. Hooker has decided the one figured to be considered a *variety*. The flowers of this variety are nearly twice the size of those the original plant produced; they were, too, of a uniform lilac-purple colour, whilst these are of a delicate white, handsomely tinged with a bright rosy-red. Dr. Hooker states, the original species grows in its native locality in wet rocky places, seldom found in woods, but in the valleys, at an elevation of near ten thousand feet, and may be considered quite hardy

in our own country. Young plants of nearly all the species from Sikkim-Himalaya have endured uninjured in the open air in the Royal Gardens of Kew, having only a bank of earth around them about half a yard high. *R. ciliatum* in its native country only grows to a bush about two feet high, and its blossoms diffuse an agreeable fragrance.

Most of our readers are aware that Dr. Hooker during his botanical mission among the mountains of India discovered a number of beautiful species, which he transmitted or brought to England. Several of them are Epiphytes, growing upon the trunks of trees similar to the stove Orchids, the roots running among the mosses, or decayed parts of them. Dr. Hooker observes in his invaluable account of these Rhododendrons, and their native localities:—"Darjeeling, the locality of the country in which these Rhododendrons were found, lies, we are told, in the Sikkim portion of the Himalaya, and is situated in lat. 27° N., and long. the same as Calcutta, from which it is distant about 380 miles. Its elevation above the sea is 7,200 feet. The mean temperature of the year is about 55° Fahr.

"The mountain Sinchul, upon a spur of which looking north Darjeeling stands, attains an elevation of 9,000 feet, and to the west of it, next Nepal, rises another conspicuous mountain, Tonglo, reaching a height of 10,000 feet. Due north of Darjeeling, at a distance of only 60 miles, the horizon is bounded by the great snowy range, having for its principal feature the peak of Kinchin-junga, which has lately been ascertained to be 28,172 feet in elevation, the loftiest mountain yet known in the world." Dr. Hooker thus describes his first impressions of this scene:—"Much as I had heard and read of the magnificence and beauty of Himalayan scenery, my highest expectations have been surpassed! I arrived at Darjeeling on a rainy misty day, which did not allow me to see ten yards in any direction, much less to descry the snowy range, distant 60 miles in a straight line. Early next morning I caught my first view, and I literally held my breath in awe and admiration. Six or seven successive ranges of forest-clad mountains, as high as that whereon I stood (8,000 feet), intervened between me and a dazzling white pile of snow-clad mountains, among which the giant peak of Kinchin-junga rose 20,000 feet above the lofty point from which I gazed! The heaven-ward outline was projected against a pale blue sky, while little detached patches of mist clung here and there to the highest peaks, and were tinged golden-yellow or rosy-red by the rising sun, which touched those elevated points long before it reached the lower position which I occupied.

"Such is the aspect of the Himalayan range at early morning. As the sun's rays dart into the many valleys which lie between the snowy mountains and Darjeeling, the stagnant air contained in the low recesses becomes quickly heated; heavy masses of vapour, dense, white, and keenly defined, arise from the hollows, meet over the crests of the hills, cling to the forests on their summits, enlarge, unite and ascend rapidly to the rarefied regions above; a phenomenon so suddenly developed, that the consequent withdrawal from the spectator's gaze of the stupendous scenery beyond looks like the work of magic. Such is the region of the Indian Rhododendrons.

"The maximum of *Rhododendrons* appears to be in Asia, and their head-quarters are on the lofty ranges of the eastern Himalaya, where the mild and moist atmosphere is eminently suited to their habit.

"A certain degree of winter cold and perpetual humidity is necessary, but the summer heat is quite tropical where some of the genus prevail, and snow rarely falls, and never rests on several of those peculiar to Sikkim." In the case of *R. Falconeri*, which grows on the summit of Tonglo, at an elevation of 10,000 feet, Dr. Hooker remarks, that the temperature of the earth in which it grew was, in the middle of May, at 27 inches below the surface, where the roots are chiefly developed, $49^{\circ} 5'$ at all hours of the day; that of the air varied from 50° to 60° .

These observations, and the mean temperatures previously quoted, show that spring and not mid-winter is the season of trial, not only in the case of the Indian *Rhododendrons*, but in that of very many other half-hardy plants from various parts of the world, especially from the mountain regions of India and South America. Comparing the figures just referred to, it will be seen that during the months of November, December, and January, the difference in the mean temperatures of London and Darjeeling is about 4° only, and the same difference is indicated for the months of July, August, and September. On the other hand, February and May, the transition months between winter and spring, and spring and summer, show a difference of 6° ; the spring months of March and April, a difference of 11° and 10° respectively; and in autumn, too, as shown in October, the difference is 9° . "Here we have a solution of the cause of our want of success in cultivating tender plants in the variable climate of Great Britain. Our springs are late and cold, and changeable; and while the winters and summers of Darjeeling and London differ but 3° or 4° , the springs and autumns show a difference of 10° and 12° . This accounts for the excitable nature and early growth of many of our half-hardy Indian plants, as well as the tendency of many such to grow to a late period of the autumn.

"Only four species, *R. Dalhousiæ*, *R. Campbelliæ*, *R. argenteum*, and *R. arboreum*, grow near Darjeeling. The second and fourth form scattered bushes at 7,500 and 8,000 feet; the *R. argenteum* is a small tree, at 8,000 or 9,000 feet.

"It was on the ascent of Tonglo, a mountain on the Nepalese frontier, that I beheld the *Rhododendrons* in all their magnificence and luxuriance. At 7,000 feet, where the woods were still dense and sub-tropical, mingling with ferns, pothos, peppers, and figs, the ground was strewn with the large lily-like flowers of *R. Dalhousiæ*, dropping from the epiphytal plants, or the enormous oaks overhead, and mixed with the egg-like flowers of a new Magnoliaceous tree, which fall before expanding, and diffuse a powerful aromatic odour, more strong but far less sweet than that of the *Rhododendron*. So conspicuous were these two blossoms, that my rude guides called out, 'Here are lilies and eggs, sir, growing out of the ground!' No bad comparison. [Above this occurs *R. arboreum*]. Along the flat ridges, towards the top, the Yew appears with scattered trees of *R. argenteum*, succeeded

by *R. Campbellia*. At the very summit, the majority of the wood consists of this last species, amongst which, and next in abundance, occurs the *R. barbatum*, with here and there, especially on the eastern slopes, *R. Falconeri*.

"The habits of the species of *Rhododendron* differ considerably; and confined as I was to one favourable spot by a deluge of rain, I had ample time to observe four of them. *R. Campbellia*, the only one in full flower early in May, is the most prevalent. Some were a mass of scarlet blossom, displaying a sylvan scene of the most gorgeous description. Many of their trunks spread from the centre thirty or forty feet every way, and together form a hemispherical mass often forty yards across, and from twenty to twenty-five feet in height! The stems and branches of these aged trees, gnarled and rugged, the bark dark coloured, and clothed with spongy moss, often bend down and touch the ground: the foliage, moreover, is scanty, dark green, and far from graceful, so that, notwithstanding the gorgeous colouring of the blossoms, the trees when out of flower, like the *Fuchsias* of Cape Horn, are the gloomy denizens of a most gloomy region. *R. Campbellia* and *R. barbatum* I observed to fringe a little swampy tarn on the summit of the mountain—a peculiarly chilly-looking small lake, bordered with sphagnum, and half-choked with *Carices* and other sedges: the atmosphere was loaded with mist, and the place seemed as if it would be aguish if it could, but was checked by the cold climate. *R. barbatum* had almost passed its flowering season; it is a less abundant and smaller tree than the last mentioned, but more beautiful, with brighter green and denser foliage, clear papery light-coloured bark, the whole forming a more picturesque mass.

"Along the north-east and exposed ridges only grow the *R. Falconeri*, in foliage incomparably the finest."

Dr. Hooker found eleven kinds in the district which he explored, but of these, one was the *R. barbatum* of Wallich, a species already known and introduced to England, and proved to be capable of bearing our ordinary winters in the climate of Chester; and another was the original *R. arboreum* of Smith, a kind so mixed up in our gardens with the various hybrid or cross-bred races to which it has given rise, as to be now seldom recognised. We now only give an abbreviated abstract of the description given by Dr. Hooker of the remaining species.

Rhododendron Dalhousiae (Lady Dalhousie's *Rhododendron*).—A shrub six to eight feet high, growing on the trunks of large trees. The branches bear leaves and flowers only at their extremities. The leaves are few, four to five inches long, elliptic-obovate, somewhat leathery, and of a darkish green colour, paler beneath. The flowers grow from three to seven, in terminal umbellate heads, which spread wider than the leaves. The blossoms are bell-shaped, very large, three inches and a half to four and a half long, and as much across the mouth, white, with an occasional tinge of rose, very fragrant, the odour partaking of that of the lemon. The flowers in age become more roseate, and are sometimes spotted with orange. This is the noblest of the *Rhododendrons*. Native of Sikkim-Himalaya, at an

elevation of from 7,000 to 9,000 feet; growing on the trunks of large trees. Flowers from April to July.

R. lancifolium (lance-leaved Rhododendron).—A shrub six to eight feet high, with spreading tortuous branches. The leaves are produced chiefly at the ends of the branches; they are three to four inches long, oblong lance-shaped, very pointed, and of leathery texture, green above, tawny beneath. The flowers grow in dense heads at the ends of the branches; they are of moderate size, bell-shaped, distinctly net-veined, and of a rich puce colour. Native of the interior: Sikkim-Himalaya. Flowers in May.

R. Wallichii (Dr. Wallich's Rhododendron).—A shrub growing from eight to ten feet high, with rugged tortuous branches. The leaves are mostly confined to the apex of the ultimate branches; they are three to four inches long, almost exactly elliptical, full green and glabrous above, paler beneath, and having a remarkably neat appearance. The flowers are large and handsome, growing in terminal heads, having six to eight in each; they are rosy lilac with deeper rose-coloured dots within the base of the upper lobe; they are bell-shaped, with a spreading five-lobed limb. Native of the interior of Sikkim-Himalaya. Flowers —?

R. Campbellii (Mrs. Campbell's Rhododendron).—A tree growing frequently to the height of forty feet, forming a large spreading mass. The leaves are oblong-lanceolate, acuminate, leathery, green and smooth on the upper surface, and clothed beneath with a more or less deeply rufous or ferruginous tomentum. The flowers grow in dense compact heads, and are of a rich rosy-scarlet colour, spotted at the base of the upper lobe with dark spots, and around the bases of the remaining lobes with paler rosy spots. Native of Sikkim-Himalaya, frequent, growing at an elevation of from 9,000 to 10,000 feet. Flowers in April and May.

R. Roylei (Dr. Royle's Rhododendron).—A small shrub with oval or elliptic leaves, three to four inches long, clothed beneath with an ochraceous-brown pulverulent substance. The flowers grow from four to eight in a loose head; they are campanulate, with a slightly spreading limb of five rounded lobes, ending in an acute point; the colour is brownish red, the lobes of the limb just tipped with bluish green; in its unexpanded state the corolla is iridescent with blue; the tube of the corolla is striated within. Native of Sikkim-Himalaya, on the mountains of the interior. Flowers in April and May.

R. cinnabarinum (cinnabar-leaved Rhododendron).—A small shrub with slender tortuous branches, bearing leaves from two to three inches long, of an acutely ovate-lanceolate form, green and glabrous above, and beneath often reddish and dotted with little scales. The flowers are small, funnel-shaped, with five spreading rounded acute lobes; they grow in small compact heads, and are of a cinnabar colour. Native of the "Sub-Himalaya mountains, interior of Sikkim." Flowers in April and May.

R. eleagnoides (oleaster-leaved Rhododendron).—A small much-branched shrub, with small obovate-trapezoid leaves, covered with minute silvery leprous scales; these leaves are a quarter of an inch

long, plane, leathery. No examples of this curious little species were found in flower. It is a little alpine, growing in the vicinity of the snow; and is "apparently single flowered, and calyculate." Native of the mountains of Sikkim-Himalaya, at an elevation of from 14,000 to 15,000 feet.

R. argenteum (silvery Rhododendron).—A fine tree growing thirty feet high, with spreading branched trunks. The leaves are very beautiful in the young state, enveloped at first in pinkish-brown scales, which are so large and closely imbricated as to resemble the cones of some species of pine; at first the leaves are erect and silky; when mature they are very large, six inches to a foot long, obovate-oblong, leathery, green above and silvery-white beneath. The flowers grow in large terminal heads; they are broadly campanulate, two to three inches long, with a limb of five short bilobed segments, spreading, two to two and a half inches in diameter; they are always white, unspotted, very handsome, and only second in size to *R. Dalhousiae*. Native of Sikkim-Himalaya: summit of Sinchul, Sirradah, and Tonglo, at an elevation of from 8,000 to 10,000 feet. "On Sinchul, the higher parts of the mountain, at from 8,000 to 9,000 feet of elevation, are more or less clothed with it: on Tonglo, as it approaches 10,000 it is suddenly replaced by *R. Falconeri*."

R. Falconeri, Hooker fil. (Dr. Falconer's Rhododendron).—A fine tree growing thirty feet in height, the trunks often two feet in diameter, the branches few and spreading. The young leaves are clothed with velvety down, and when in the bud are concealed by downy glutinous scales. When perfect, they are from eight inches to a foot in length, obovate-elliptic and obtuse, very coriaceous, glossy green above, and beneath, except on the thickly-netted veins, clothed with a dense pale-ferruginous down. The flowers grow in heads of moderate size, but composed of numerous rather small but densely placed flowers, which are white, bell-shaped, with a limb of ten rounded lobes. One of the most striking and distinct of the genus. Native of Sikkim-Himalaya; summit of Tonglo, at an elevation of 10,000 feet.

R. Hodgsoni, bush from twelve to twenty feet high; large leaves, silvery beneath; flowers pale rosy-lilac, eight to ten-lobed and inclose heads.

R. Aucklandii.—Noble species, four to eight feet high; leaves large; flowers white, veiny, tinged with pink, broad and shallow. (Synonym, *R. Griffithii*.)

R. Thomsoni.—Bush, eight to fifteen feet high; leaves broad, flat; flowers campanulate, and of a deep brilliant blood-red colour. Magnificent species.

R. candelabrum.—Bush; flowers sulphur-coloured, edged with rose. A variety.

R. Edgworthii.—Fine shrub, medium size, often pendulous from trees or rocks. Leaves large; flowers large, white, two or three together.

R. barbatum.—Tree, forty to sixty feet high. Flowers rose-coloured, in compact heads. *R. lancifolium* is a variety of this species.

R. glaucum.—Handsome shrub, two feet high. Leaves small; flowers a bright rosy-pink, in large clusters.

R. pumilum.—Smallest of these *Rhododendrons*; very neat. Roots among moss, growing three to four inches high. Flowers on long stalks, rich pink.

R. æruginosum.—Shrub, four feet high. Leaves blunt; flowers lilac, in large heads.

R. Wightii.—Handsome shrub, ten feet high. Leaves large, flat; flowers pale yellow, spotted with red, in large heads.

R. lanatum.—Shrub, the young wood covered with a white cottony appearance. Flowers sulphur, spotted with red.

R. fulgens.—Shrub, four feet high. Leaves broad, woolly beneath, purplish; flowers rich blood-red, in close round heads.

R. campylocarpum.—Bushy, six feet high. Leaves short, broad; flowers pure sulphur, without spots, in large heads. Charming species.

R. Maddeni.—Fine shrub, six to eight feet high. Leaves sharp-pointed, bright rusty beneath; flowers white, long funnel-shaped, in heads of three or four together.

R. camelliaeflorum.—Small slender shrub, pendulous from trees or rocks. Leaves brown beneath; flowers white, two or three together, resembling a single *Camellia*.

R. pendulum.—Small pendulous epiphyte. Flowers white, two or three together.

R. salignum.—Pretty shrub, two to four feet high. Leaves narrow; flowers yellow, spreading, and shallow.

R. virgatum.—Small shrub, glabrous, four feet high. Flowers small, purplish-red.

R. triflorum.—Shrub, four to six feet high. Flowers greenish-yellow, in three's together. A variety of the last.

R. nivale.—Small depressed shrub, spreading half-a-yard or more. Leaves small; flowers rose-coloured. It is very fragrant, resembling the *Eau de Cologne*.

R. setosum.—Elegant plant, nearly a foot high. Leaves leathery; flowers borne in profusion, a lively rose-purple colour. It is much like *Rhodora* in appearance, but has brighter flowers, and leaves Box-like. It diffuses a strong aroma for some distance around.

The introduction of this fine race of *Rhododendrons* is truly valuable, and no doubt, in a short time, all the principal gardens and grounds of the nobility and gentry in this country will be enriched and ornamented with them.

NOTES ON NEW OR RARE PLANTS.

ACACIA CYCNOBUM. SWAN RIVER ACACIA.—Mr. Bentham has, in his valuable *Memoir on Mimoseæ*, enumerated no less than 340 species in the first volume of the "London Journal of Botany," published in 1842; and many have since been added. These he has divided into six series, and those into sections. Of these, the first three series containing 228 species, belong to Australia, and of them 204 are

phyllodineous species, that is, they have the leaves reduced to leaf-like petioles. The third series of the genus, "*Pulchellæ*," is characterized by being "*unarmed*, or furnished with spines," there are eleven species here included, and *A. Cycnorum* is one. It is a handsome growing shrub, from two to three feet high. Leaves bipinnate. Flowers in globe shaped heads, produced numerously along the branches, of a deep yellow colour. It is a charming species, deserving a place in every greenhouse or conservatory. Messrs. Lucombe, Pince, and Co. obtained seeds from the Swan River settlement, and have plants of it. (Figured in *Bot. Mag.*, 4653.)

BRACHYSEMA LANCEOLATA. LANCE-LEAVED.—Is a native of the Swan River, plants of which are in the establishment of Messrs. Lucombe, Pince, and Co. It is a handsome shrubby plant, having silky branches. The flowers are produced on sub-compound *racemes*, they are of a rich scarlet, with the margin of the vexillum white, red at the disc, with a large yellow spot in the centre. Each pea-like blossom is an inch long, and being produced in profusion renders it very ornamental, and deserving a place in every greenhouse. (Figured in *Bot. Mag.*, 4652.)

CYCLAMEN ATKINSII.—Mr. Atkins of Painswick has, for many years, paid much attention to this lovely family of flowering plants, and possesses an extensive collection of them, which he is yearly increasing by raising seedling varieties. The present variety *C. Atkinsii* was obtained by a variety of *C. coum* being impregnated with *C. persicum*. It has the neat habit of *C. coum* or *C. vernum* and the colour and larger petals of *C. persicum*, having at the same time the foliage dark, yet relieved with a lighter band, or marbled. Amongst the seedlings, Mr. Atkins states, that every plant deviating in the marking of the foliage from the seed-bearing parent, produced white, or blush flowers, whilst those retaining its plain dark leaf, have invariably bloomed with different shades of the colour of that species. The blossoms of *C. Atkinsii* are elevated on longish stalks, of a French-white, marked with a deep crimson blotch at the base of each segment. They are not fragrant. (Figured in *Magazine of Botany*.)

CYCLAMEN IBERICUM.—Leaves *flat heart-shaped*, of a deep green, with an irregular heart-shaped belt of pale greyish green, at some distance from the edge of the leaf. The veins are *sunken* on the upper face, *prominent* and green beneath, on a dull reddish-purple ground. The flowers vary in colour, in some pale rose, or flesh-colour, in others, a deep rose, and in some white, but in all cases they have five purple bars or spots in the front view. (Figured in *Magazine of Botany*.)

DENDROBIUM FIMBRIATUM ; VAR. OCLATUM. THE DARK-EYED FRINGED DENDROBIUM.—A stove Epiphyte orchid, from the East Indies. In our collections (in England) there are two distinct varieties of this most beautiful flowering plant; one has *whole coloured* flowers, of a rich apricot-yellow colour; and the other is of a similar colour, but has in addition a large deep rich pitch-brown spot in the middle of the lip. This latter, now figured, is sometimes known under the erroneous name of *D. Paxtonii* which is a two-flowered species. The one

now figured bears numerous flowers in a long raceme, twelve blossoms are given in the plate inserted in "Paxton's Flower Garden 84," and only a *part* of a raceme is given. Each blossom is three inches across. The lip is large, and its margin beautifully fringed. It merits a place in every collection of Stove Orchids

GASTROLOBIMUM PYRAMIDALE.—Mr. Drummond sent seeds of this handsome flowering shrubby plant, from the Swan River colony to Messrs. Henderson, of Edgware Road. It forms a neat shrub, growing in a pyramidal form, four or five feet high, but by pruning can be easily kept a lower bushy plant of any size desired. The flowers are produced in what may be considered broad pyramidal spikes, or racemes, which are composed of large lateral heads of blossoms, three heads arising in a whorl where the leaves are, and each head upon a footstalk nearly two inches long. Each whorl of three such heads of beautiful pea-formed blossoms, and successively along the branches, render the plant very ornamental. The flowers are of a rich orange-yellow marked with crimson; and the keel a dark maroon. A single blossom is half an inch across. It is a profuse blooming plant, deserving a place in every greenhouse, and will be valuable for an exhibition specimen. (Figured in *Magazine of Botany*.)

HELLEBORUS ATRORUBENS. THE DARK PURPLE HELLEBORÆ.—This is sometimes called the purple Christmas Rose. It is a native of Hungary, a hardy perennial, found there growing in the woods and thickets. In our own country it blooms much more beautiful when in the greenhouse, than in the open air. In the open air it blooms in March and April. The stem is about half a yard high, and produces its branches by two or three series of forkings. The flower-buds are of a deep black purple. The open blossoms a violet-purple, with the edges and centre green. It soon becomes a dingy-green. Each blossom is about three inches and a half across. It is perfectly hardy, and a pretty spring blooming ornament. (Figured in *Paxton's Flower Garden*.)

MEDINELLA SIEBOLDIANA.—A native of the Molucca Islands, from whence it was obtained by Mr. Van Houtte, to the Belgian Gardens, through whom it has been received into this country. It forms a handsome stove shrub, three to four feet high. The flowers are produced in a thryoid drooping panicle, of a pale rose colour. Each blossom about three parts of an inch across. (Figured in *Bot. Mag.*, 4650.)

PODOCARPUS NERIIFOLIA.—A native of Nepal, it is a shrub, of the order of Yews (*Taxineæ*). It is grown in the greenhouse in the Royal Gardens of Kew, but it very probably would bear the open air if trained against a wall. The receptacle of the fruit is showy and beautifully adorns the branches, from a pale yellow-green they become orange-red, at length deep purple; at its end it bears an oval glaucous green seed. (Figured in *Bot. Mag.*, 4655.)

TRECHOPILIA SUAVIS. THE SWEET.—An Orchid from Central America, which Messrs. Lucombe, Pince, and Co. have obtained, and

in whose establishment it has bloomed. The sepals and petals are spreading, of a creamy-white. The lip is very large, with a creamy-white ground, but beautifully spotted with pale purple, and yellow in the throat. The margin is handsomely crisped and notched. Each blossom is about five inches across. It is exceedingly beautiful, and highly fragrant. It ought to be in every stove collection. (Figured in *Bot. Mag.*, 4654.)

PLANTS IN BLOOM AT THE ROYAL GARDENS OF KEW.—*In the Stove.* *Victoria reginæ*, *Eranthemum pulchellum*, with a profusion of rich blue flowers; the white variety is also pretty. *Achimenes picta*, *Ardisæa crenata*, with a profusion of its fine red berries, very handsome. *Hibiscus rosa-sinensis*, single, double buff, and double scarlet, all noble looking flowers. *Gesnera Herbettii*, with spikes of flowers two feet long, the large rich scarlet blossoms beautifully spotted, inside the large tube, with deep crimson, producing a splendid appearance. *Euphorbia Jacquiniflora*, its fine spikes of orange-scarlet flowers have a beautiful effect. It merits a place in every stove or warm greenhouse. *Begonia manicata*, large panicles of pretty *flesh-pinky* flowers, very interesting.

Phaius Wallachi. *Bletia*.—This is a noble species of the old and well-known tribe of *Bletia*, or *Limodorum*. The leaves are six inches broad. The plant had several fine heads of flowers, and each blossom was six inches across; the sepals and petals of a deep fawn colour. Lip yellow and purple, with a broad white margin. It merits a place in every collection.

Columnæ Schiediana.—Tube near three inches long, broad, yellow, striped with bright crimson. Very handsome.

Æschynanthus Javanicus.—The tube three inches long, of a deep rich scarlet. The plant is in a wire basket, suspended, and the branches hang over the sides, and the fine blossoms produce a pretty effect on the drooping stems.

Oncidium luridum.—A beautiful orchid. The numerous flowers produced on a large branching panicle. Each blossom is two inches across, deep yellow, beautifully marbled over with brown; and the surface being very undulated gives it a very interesting appearance.

In the Greenhouse.—*Eutaxia myrtifolia*.—Neat lance-shaped leaves, flowers pea-shaped, orange-yellow, with a red eye and keel; blooms profusely, and well worth a place in every greenhouse.

Bossiaea linophylla.—Neat narrow leaves, flowers pea-shaped, bright yellow with red eye; profuse bloomer, showy and neat.

Zichia tricolor (Kennedy).—A neat twining plant, flowers pea-shaped, produced numerously, in large heads of orange scarlet, and yellow colours in each blossom, very prettily trained to a flat-faced circular wire frame.

Chorozema varium.—Flowers a deep orange-yellow, and the keel a rich blood red; the contrast very striking; one of the best.

Chorozema cordata.—Neat yellow, with a rosy-red keel, very pretty. There is a variety of it, having flowers of a bright orange-scarlet, with a purple keel; very handsome. One plant had 20,000 flowers.

Chorozema Henchmannia.—Rosy-red with yellow eye, and a deeper coloured keel.

Gastrolobium spinosum.—A deep orange-yellow, with a dark crimson keel; very pretty.

Podolobium trilobatum.—Flowers large, yellow, with a deep red keel; leaves neat, three lobed; very pretty.

Pultenæa retusa.—Bright yellow, six to eight flowers in each terminal head. The foliage is small and pretty.

Pultenæa thymifolia.—Pretty small foliage, dwarf and bushy, flowers golden-yellow, with outside a dark maroon; blooms in profusion.

The above ten pea-flowered neat shrubby plants deserve a place in every greenhouse.

Zuria lanceolata.—Leaves small, three lobed, neat compact shrub. The flowers are about the size of plum-blossoms, pure white, and the plant covered with them; very neat and pretty.

Prostranthera rotundifolia.—Each blossom is in the form of a small *Gloxinia* flower, an inch long, of a pretty lilac, produced in profusion; very neat and pretty.

Westringia erimecola.—The flower is much like in form a *Schizanthus pinnatus*, an inch across, white tinged with lavender, in profusion; a neat handsome shrub.

Muraltia stipulacea (*Polygala*).—Flowers small, in long spikes, of a rich violet colour; very pretty.

Dielytra spectabilis.—This fine *Fumaria*-like flower, is one of the prettiest, its beautiful drooping flowers, in long racemes, pink and white, are very interestingly beautiful. Every stove, greenhouse, and flower-garden ought to have some of it; it makes a charming bedding plant.

There are considerable numbers of *Epacris*, *Acacias*, *Cinerarias* and *Ericas*, in bloom; of the latter the prettiest are—

E. intermedia.—Tube one inch, borne in long spike around the shoots, drooping, white; delicately pretty.

E. Sindryaca.—Bell-shaped, half an inch long, purple below, and the rest flesh colour, in profusion; very pretty.

E. odorata.—Bell-shaped, half an inch long, white, fragrant; pretty.

E. delecta.—Flowers erect, short tube, which is about half an inch across the top; they are produced four or five together in a cluster; a French lilac colour, with a darker centre; very neat.

E. cerinthoides major.—Flowers in terminal heads, tube an inch and a-half long, a rich scarlet; very handsome; ought to be in every collection.

E. grandinosa.—Very small pure white flowers, borne in vast profusion, covering the plant with a white mantle of little pearls; very pretty.

E. persoluta alba.—Flowers very small, white with black anthers, which have a very pretty contrast, and render the plant most interesting; it is covered with bloom.

E. sulphurea.—Tube an inch long, hairy, sulphur tinged with green; very neat.

E. M'Nabbiana.—Tube bellying, an inch and a-half long, rosy-red

upon a light ground, with a white tip, very handsome; dwarf grower and free bloomer.

E. Beaumontiana.—Bell-shaped, smallish size, flesh colour; pretty.

E. Linnæoides superba.—Tube one inch, purple below, and the rest white, in profusion; neat and pretty.

E. cistifolia.—Small flowers, white, with black anthers; very pretty; ought to be in every collection.

RHODODENDRON JAVANICUM.

MANY of the readers of this Magazine, no doubt, have seen in bloom at the Chiswick, Regent's Park, and Surrey Gardens shows, plants of these magnificent and very handsome introductions. They are natives of Java, where they are found growing on the high volcanic mountains. The *R. Javanicum* is partly an Epyphite in habit, growing occasionally on the decayed trunks of trees, at other times on the sides of mountains, in a rich vegetable deposit intermixed with spent lava from the volcanos. There it will attain, occasionally, to the height of six feet, becoming a spreading bush.

In 1848 seeds were received in this country from Java, and a quantity of plants were raised. The seedlings require careful attention the first year, but afterwards the plants grow as freely as the general kinds of Rhododendrons, or Indian Azaleas. They require to be grown in sandy peat, well chopped into pieces, and if not sandy enough, a portion of the usual silver sand must be sprinkled amongst it, as well as a few pieces of broken stones or pebbles being intermixed. A *very liberal* drainage must be given, and care must be taken not to overpot the plant.

Messrs. Rollisson, of Tooting Nursery, have a very extensive collection of these plants, where they bloom most admirably. Their mode of treatment is given in an interesting article communicated from their establishment by Mr. Buckley, and inserted in the *Magazine of Botany* for last month. He observes,—

“When the young shoots are fully developed, and the leaves have arrived at their full size, and are beginning to harden, remove the plants to an airy greenhouse or cold pit, where they may remain through the winter; if placed in the latter, give air daily, according to the weather. Keep the foliage dry, and supply water very sparingly to the roots. In the spring, as soon as the plants show symptoms of growth, place them in a house where the atmosphere is kept moist, with a temperature of 55° to 60°, or 5° higher in the sun; sprinkling them daily with tepid water,—three times a-day, in bright sunny weather, will not be too often. They may remain in this situation till the end of May or beginning of June; and they should then be plunged up to the rim of the pot in an open border, where the sun can shine fully upon them; the spaces between the shrubs of an American border will be found suitable, provided they do not crowd too near. The attention now required will be to keep them well watered in dry weather. The leaves will soon

acquire a fine glossy surface, dark colour, and a leathery consistency; and if the season is mild and showery, they will not unfrequently make a second growth out of doors, and set flowers on the shoots so produced. The plants may remain in the open border until the month of September, or later if there is no appearance of frost, when they should be placed in a cold greenhouse for the winter as before.

"When the flower-buds are beginning to throw off their numerous scales, preparatory to opening, place the plant at the warmest part of the house; they will expand all the better for it, especially if it be early in the season. By this method as many as twenty flowers have been produced in one head, all perfect, the individual flowers measuring exactly two and three-quarters inches across, of a rich orange-yellow, and of remarkably firm texture: the entire head formed a globular cluster, upwards of two feet in circumference, which continued in perfection more than a fortnight. The probability is that much larger heads may be obtained, as this was from a seedling of only three years' age.

"There is a variety of *R. Javanicum*, with long lanceolate leaves, which vary in size exceedingly on the same plant, being from two to five inches in length, and from half an inch to two inches in width at the widest part; it is from the same locality as the broad-leaved sort, and of much slower growth, but has not yet flowered.

"Although among the recently-introduced Sikkim Rhododendrons there are many splendid kinds, it is remarkable that *yellow* is a scarce colour among them. *R. lanatum*, *R. Wightii*, and two or three others, are of a straw colour, and *R. lepidotum* is described as having flowers of a dark yellow, but here the heads are small, and the habit is weak. Hybridists must therefore look to *R. Javanicum* for a new race of *hardy yellow* hybrids. That these will be obtained, no one who is at all conversant with the history of our hardy scarlet sorts can for a moment doubt; directly, or indirectly, these have all been obtained from *R. arboreum*, some partaking of the character of trees, and others flowering freely when less than a foot in height. The hardy scarlets at the present time amount to upwards of thirty sorts. For the purposes of the ornamental planter, the importance of having a new and distinct colour, for grouping in clumps, or planting in the American border with the sorts already in cultivation, can scarcely be overrated.

"Whether *R. Javanicum* will eventually prove hardy it is difficult to say; but if not, its progeny most assuredly will be. It has already been made to produce seeds in this country, hybridised with several leading hardy sorts, and the young plants have passed through the first six months of their existence. *R. Zeylanicum*, *R. Rolissonii*, and *R. cinnamomeum*, were treated as greenhouse plants for very many years, but it is now satisfactorily proved that they are as hardy as the common kinds, at least in the neighbourhood of London; the foliage is also much finer than when kept in-doors. *R. cinnamomeum* sets its flower-buds abundantly when planted in the open border, and if taken up and potted late in the autumn, or early in spring, makes a showy conservatory ornament, to be returned to the border after blooming. *R. Dalhousie*, as a parent, appears to promise flowers of extraordinary

magnitude, and, what is better, sweet-scented; and *R. ciliatum* will probably be the parent of a new race, admirably adapted for pot culture, being of a dwarf habit with the foliage of a lively green. In fact, there are now sufficient materials for producing almost any given form or colour, and to render this charming family suitable for any required purpose."

TREATMENT OF GLOXINIAS.

BY MR. ARTHUR PEARSON, MOUNT PLEASANT, LIVERPOOL.

THIS tribe of plants is an especial favourite of mine. Having grown a considerable collection of them for several years, and more successfully than any other I have seen, I am induced to forward a few essential particulars, which I think most materially contributes to the vigour and health of the plants.

I pot them in a compost of equal parts of good turfy loam, having been in a heap six months or more previously, turfy peat, leaf mould, and well-rotted cow-dung. These are mixed up, and a sprinkling of bits of bone and charcoal is added thereto. The compost is well chopped and broken, but not sifted. A liberal drainage is also provided. After the winter season of rest, the tubers are taken out of the pots, all the soil shook off, and the old fibrous roots dressed away. As soon as potted, they are placed in a gentle warmth, watered very sparingly till the roots and stems begin to push, then gradually increasing the quantity. When the plant requires repotting, it is done by keeping the ball entire. When the tops have grown to some extent, I syringe the leaves overhead as well as underneath two or three times every day, using soft water. This washing process contributes very materially to a successful vigorous growth and bloom.

The larger the tuber is the greater will be the number of shoots which push from it; only a due proportion must be retained, the others be thinned away. Even the largest tubers ought not to have more than five shoots retained, a centre one being trained erect to fill up the middle, and four shoots being bent and tied outwards at equal distances; thus the plant will be duly furnished so as to form a vigorous bushy plant. If there be not in the first instance a sufficiency of shoots, then when one or two have pushed two or three inches high pinch off the tip of such shoot or shoots, and side ones will soon push forth, and a supply will be furnished for any desirable purposes. After blooming, water at the roots is gradually lessened and a three months' rest is given.

THE BEST METHOD OF ARRANGING A TULIP BED.

IN the hurry with which I wrote, when addressing you last, on the best method of arranging a Tulip bed, I omitted to notice the second method, which is now becoming very general, and which, I think, Mr. Glenny denominates 'the herring-bone fashion.' It is this, and may be briefly described as follows:—Instead of planting rose, bybloemen, and bizarre, rose, bybloemen, and bizarre, crosswise, throughout the

whole bed, as described in my last, the arranger of the bed must begin and complete his middle row with fourth-row flowers, to the length he means to extend his bed—say, first, a rose; second, a bybloemen; third, a bizarre, and so on through the whole length. Then, to complete his first row, a pair of bizarres of the same variety must be put into the third and fifth compartments, a pair of bybloemens into the second and sixth, and a pair of roses into the first and seventh. This completes the first row. The second row, having a bybloemen in the centre, requires a pair of roses in the third and fifth places, a pair of bizarres in the second and sixth, and a pair of bybloemens in the first and seventh. The third row, having a bizarre in the centre, requires a pair of bybloemens in the third and fifth places, a pair of roses in the second and sixth, and lastly, a pair of bizarres in the first and seventh places, and so on throughout the whole bed.

When the stock of the amateur is too limited to admit of carrying out the arrangement in pairs, then a couple of varieties must be selected to match as nearly as possible, so that remarks and comparisons may be made the more readily during the season's growth. Disputed flowers may thus be more easily compared with each other than when grown in different parts of the bed, and their appearance and character studied more carefully during the whole period of their bloom.

A good bed arranged in this manner, must be admitted by all who have had the gratification of such a sight, to have a grand effect. In the first style of arrangement, described before, the lines of unbroken colour extend in a sloping manner, from one side of the bed to the other, whereas, by this arrangement, the line of one colour extends from the side row to the centre, through three rows, and then strikes off again from the centre to the side, at the same angle, and through the same three rows on the opposite side (like the angle of incidence and the angle of reflection in the science of optics).

This may be very simply represented by the following copy of ten consecutive rows from the Tulip book of Mr. Thomas Bromfield, of Felton Mills, who grows his flowers in this manner.

TWENTY-THIRD ROW.

- 1 Walker's Coronation.
- 2 Dutch Ponceau.
- 3 Joseph Strutt.
- 4 Headley's King Richard.
- 5 Zuill's Sir Robert Peel.
- 6 Dutch Ponceau.
- 7 Walker's Coronation.

TWENTY-FOURTH ROW.

- 1 Lady Lilford.
- 2 Lawrence's Patty.
- 3 Alexander's Monarch.
- 4 Atkinson's fine Rose.
- 5 Duke of Devonshire.
- 6 Lady Exeter.
- 7 Lady Lilford.

TWENTY-FIFTH ROW.

- 1 Headley's Amyntas.
- 2 Shakspeare (Lawrence).
- 3 Lady Wilmot.
- 4 Violet Grand Monarch.
- 5 Lady Crewe.
- 6 Shakspeare.
- 7 Amyntas.

TWENTY-SIXTH ROW.

- 1 Duke of Wellington.
- 2 Beteral's Brulante Eclatante.
- 3 Brown's Salvator Rosa.
- 4 Royal Sovereign, XX.
- 5 Hooker's Salvator Rosa.
- 6 Beteral's Brulante Eclatante.
- 7 Duke of Wellington.

TWENTY-SEVENTH ROW.

- 1 Triomphe Royale.
- 2 Parmegiano.
- 3 Pompe Funebre.
- 4 La Vandikken.
- 5 Pompe Funebre.
- 6 Parmegiano.
- 7 Triomphe Royale.

TWENTY-EIGHTH ROW.

- 1 Lord Lyndhurst.
- 2 Marcellus.
- 3 Jenny Lind.
- 4 Mentor.
- 5 Rose Magnificent.
- 6 Marcellus.
- 7 Lord Lyndhurst.

TWENTY-NINTH ROW.

- 1 Solon.
- 2 La Belle Nannette.
- 3 Gibbons's Venus.
- 4 Fine Bizarre, from Polyphemus
and Leopold.
- 5 Gibbons's 51.
- 6 La Belle Nannette.
- 7 Solon.

THIRTIETH ROW.

- 1 Amadis.
- 2 Pandora.
- 3 Duke of Devonshire.
- 4 Znaill's John Waterson.
- 5 Lord Strathmore.
- 6 Smith's Sir Robert Peel.
- 7 Amadis.

THIRTY-FIRST ROW.

- 1 Lady Louisa.
- 2 Leonidas.
- 3 Clark's Clio.
- 4 Violet Quarto.
- 5 Queen Victoria (Greig).
- 6 Leonidas.
- 7 Lady Louisa.

THIRTY-SECOND ROW.

- 1 Sheet Anchor.
- 2 Lady Crewe.
- 3 Lady Flora.
- 4 Tyso's Polydora.
- 5 Prince Albert (Gibbons).
- 6 Lady Crewe.
- 7 Sheet Anchor.

And so on.

"Now, putting R for rose, B for byblœmen, and Z for bizarre, the inexperienced grower will see by the table underneath, a representation of the lines of unbroken colour in a bed so arranged.

	23rd.	24th.	25th.	26th.	27th.	28th.	29th.	30th.	31st.	32nd.
1.	Z	R	B	Z	R	B	Z	R	B	Z
2.	R	B	Z	R	B	Z	R	B	Z	R
3.	B	Z	R	B	Z	R	B	Z	R	B
4.	Z	R	B	Z	R	B	Z	R	B	Z
5.	B	Z	R	B	Z	R	B	Z	R	B
6.	R	B	Z	R	B	Z	R	B	Z	R
7.	Z	R	B	Z	R	B	Z	R	B	Z

The effect thus produced is truly beautiful, and all who have seen it carried out with judgment, must admit that it heightens in an eminent degree the attractions of even a first-rate collection.—*William Harrison, Midland Florist.*

[We extracted a part of Mr. Harrison's former Article on this subject, which appeared in our May Number, and as it is intimately connected with the present one, we extract this portion in reference to arrangement, from his judicious remarks.]

FORMATION OF A FLOWER GARDEN.

BY A PRACTICAL MAN.

LAYING out flower gardens, that is, fixing the boundaries and arranging the beds and borders,—grouping the trees, shrubs, and herbaceous plants,—together with tracing the walks and disposing the buildings, ornaments, or other features,—requires as much taste and judgment as is required in the cultivation of the plants.

Many of us have read of the elaborately-designed flower-gardens of Italy, France, and Holland, during the sixteenth and seventeenth centuries. Right lines, right angles, and regular geometrical figures, then prevailed; and lest these should not be complicated enough, all kinds of fret and scroll work were imitated on smooth turf, or on a surface of gravel, therein forming beds of the most tortuous and whimsical character. This style was introduced into the royal and many noblemen's gardens in Britain, but almost entirely disappeared soon after the commencement of the last century. This was succeeded by a new scheme, the leading character of which consisted in irregular dispositions, and indiscriminate intermixture of trees, shrubs, and herbs, arranged without order in clumps and groups, bounded by waving lines. This new fashion of irregular planting was not only adopted in flower gardens and pleasure grounds, it was transferred to the park also; and in this style the greater number of the country seats in this country appear at this day; and although it has been the reigning taste for above this hundred years past, it has not escaped censure. The accurately-cut edges of the walks and clumps, were said to be hard and too obtrusive, making the line between the plants and turf too distinct. Box edgings were equally objectionable, as they formed no softened intermediate link between the turf or gravel and the trees. These defects were partly done away with, by giving up digging the clumps, and allowing the turf to flow in among, and be lost under, the plants. The edges of the walks, too, were beaten down almost level with the gravel, which took off from the ditch-like appearance of the walks.

Professional men have shown themselves indefatigable in carrying on a history of landscape gardening, describing its changes, recording the merits of the various styles, as well as pointing out their defects, with the laudable view of defining the taste, and fixing the execution upon something like sound principles. With respect to flower gardens, Mr. Loudon recommended the old French style, in certain situations,—that is, where the flower-pots are *looked down* upon from a terrace above; because if plots are designed and displayed in very elegant forms, and regularly disposed with respect to each other, their elegance of design and variety of outline are lost, unless seen from an elevated station. And all this, he thinks, is perfectly consistent, because a flower garden, being a confessedly *artificial* creation, every device, every mark of art is admissible, in order to interest and enhance the beauty of the scene.

On level grounds, or that which is nearly so, he advised to *keep up* the artistical character of a flower-garden, by disposing all the plants in circular beds, each of these containing a group of one species or

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family; and to give variety, making the circles of different sizes, varying from eighteen inches to six feet in diameter; and as another source of variety, placing the circles singly, or in larger or smaller masses or *constellations*, as he calls them. In one place a large circle may be surrounded by several small ones: or, where a thicket may be required, two or three large circles may be irregularly fringed, with a number of various sized ones, always observing that no two circles be nearer together than two feet. As these circles may be variously disposed on the turf, there would be no sameness in the composition, and much variety, both of form and foliage, would be the result. If squares were used instead of circles, more variety might be given; but as angles cannot be so well concealed by planting, the curving outline of circles are to be preferred.

As the tallest growing plants would always occupy the centres of the circles, and the others according to their stature would be graduated down to the edges, the whole might be supposed to appear like an assemblage of distinct tufts or cones of foliage. But this would be no more offensive to the eye than what is commonly called a *hanging wood*, which is universally admired in sylvan scenery, from the numerous catching lights reflected from such a surface.

The adoption of this style, for giving pleasing features to a flower-garden, affords facilities to the flower-gardener for grouping his plants, and in choosing just such sized beds as will contain his stock of plants, whether perennials, biennials, or annuals. Single trees of compact form, and ornamental, may occupy the centres of some of the larger circles; and these may be accompanied by shrubs of similar foliage and form, and from the diversity of tints and manner of leafing of the different groups, if judiciously associated or dissociated by the planter, much of the beauty of the garden will arise.

A full breadth of lawn in due proportion to the area of the garden should be preserved, and which, from the shape of the beds, would have an exceedingly varied outline, advancing or receding from the eye, from whatever point it may be viewed.

Gardens, which have been laid out in this manner, it is said, have a very fine effect; and though recommended by Mr. L. for flower-gardens, he guards himself against it being supposed that he would recommend the same style in planting a park, lest it should cause the reintroduction of the odious feature of *round clumps*, which disfigure so many of our modern parks, and which have been deservedly condemned.

THE DISTRIBUTION OF EVERGREEN TREES, SHRUBS, &c.

BY J. DENNIS, B.C.L.

If yews be planted in proximity to a mansion, for the sake of valuable shelter from bleak winds, they should not assume a prominent position, but should be interspersed with groups of Weymouth pine or bay, and be faced with laurels of luxuriant growth. By such contrast, the gloom

of their dingy leaf is relieved with vivid and glossy green; or, if the contrast appear too strong, it may be mellowed by blending Portugal laurel in an intermediate position. In short, the recommendation cannot be too frequently reiterated, to substitute a studied assortment of tints for tasteless indiscriminate admixture. Let but the pictorial artist be permitted, or the amateur condescend, to transfer his principles of taste, the one from his easel, the other from his gallery, to occasional superintendence of English landscape-gardening, and he would contribute to the production of a living vegetative picture, constituting incalculable improvement in style, and commanding inevitable commendation from the spectator of cultivated taste. Nay, pleasure-grounds thus constructed would excite universal admiration, and impart universal gratification. Picturesque effect, copying and harmonising with natural scenery, elicits pleasurable emotions, even in such as "know not why, and care not wherefore." But, for accomplishment of such an important *desideratum*, science must be suffered to acquire unlimited confidence, in exercise of control; while prejudice must cease to plead for senseless "custom, more honoured in the breach than in the observance." An individual proprietor, or a public association, might rest assured of the anticipation of a result decidedly warranting the experiment.

In resumption of the topic of evergreen trees, for formation of a foreground, it may strongly be recommended, while collecting perennial foliage of every species, to permit each variety of the beautiful Holly to predominate. Single or combined, from elegance of shape, delicacy of leaf, and duration of mantling, the Holly constitutes an embellishment almost unparalleled, yet too frequently neglected. Of faster growth than the deciduous oak, it attains expansion competent to the gratification of the planter's eye, with not less certainty, in the ordinary calculation of life's duration, than to please and profit posterity. It should, then, on various accounts, abound in the proximity of a decorated mansion, blended with masses of bay, backed by cypress, yew, and pinaster, and faced with laurel, laurestinus, Portugal laurel, privet, phillyrea, arbutus, with other flowering or variegated shrubs.

In similar relative situations, but in prominent advance from trees and unblossomed shrubs, flowering evergreens should invariably rank. Defying "the icy fang and churlish chiding of the winter's wind," the gay, cheering, precocious laurestinus anticipates the lingering arrival of an English spring. Tenacious of florage and permanently retentive of foliated decoration, it is entitled to numerical predominance over every blossoming shrub. By seasonable intervention and flowering profusion, it compensates for temporary diminution of ornament, in other component ingredients of a shrubbery, thus transferring to nipping winter's gloom the exhilarating semblance of summer's embellishment. Productive of such interesting impression in pleasing the eye, it certainly merits conspicuousness by prominent position.

The arbutus is a shrub peculiarly elegant and eligible, from perennial decoration, rapid growth, and superior beauty in shape and tint of leaf, from delicate blossom, and glowing berry. If suffered to remain unpruned, by gaining height, it becomes hollow and leafless beneath,

retaining, like other evergreens, only two year's leaves, except about midsummer, when the third year's are annexed, some weeks previous to the decay of the first. If not surrounded by evergreens more stunted in growth, for concealment of its lower leafless branches, it should biennially be deprived of a few long shoots, by application of the pruning-knife, the shears being calculated to render a shrub hideously cabbage-poled. Any shrub judiciously pruned will retain resemblance of its natural form. Artificial treatment should be studiously disguised, and interposition of control be invariably concealed.

The phillyrea presents striking contrast to the gay or gaudy display of flowering shrubs, being characterised by singular chasteness and unobtrusive simplicity. It is of intermediate tint, diminutive leaf, and moderate growth; consequently is precisely adapted to an advanced position. It will there present a striking contrast to the imposing glare of variegated shrubs, whether holly, aucuba, or others of similar class. Here, too, that lowly, yet cheering harbinger of spring, the mezereon, should rank, interspersed with contemporaneous masses of hepatica, snowdrop, crocus, red daisy, and other vernal flowers, protected by a wicker fence. The cypress is adapted, by its taper form and elevation, to relieve a structure. The pyracantha, pomegranate, trumpet-pomegranate, white jessamine, but, paramount to all, the elegant tamarisk, supply ornamental covering to a wall. In a sheltered nook, even these may be surpassed by the beautiful single-blossomed myrtle. From mildness of climate, it abounds in Devonshire, perhaps in no instance so luxuriantly as in a garden of Mr. Necks, curate of King's Kerswell, where it acquires considerable size detached from a wall, as well as height when attached. The front of a house at Bishop's-Teignton has long been covered to the top by myrtles of forty years' growth, protected from the easterly wind by a wing, and from the westerly by an equal defence, with the advantage of a southern aspect.

THE MANAGEMENT OF EUPHORBIA JACQUINÆFLORA.

BY MR. JAMES PARKES, GARDENER, GROVE LODGE, LIVERPOOL.

I HAVE noticed that this beautiful flowering plant has been often recommended by the Editor in this Magazine, and its blossoms ranking in Covent Garden Market, London, as one of the most strikingly beautiful.

I have several fine plants under my care, and which are grown and bloomed more successfully than any I have seen elsewhere, either in or around London, or the country also. I therefore forward the particulars of my mode of management, and desire it may appear soon, so that the benefit of this season's treatment may be realized by any who please to adopt it.

This beautiful plant I increase by cuttings taken off in March, and planted in light, rich, sandy soil, plunging the pots in a strong hot-bed. I have two methods of culture for this plant. First, when low, bushy plants are wanted, take strong cuttings of well-ripened wood, six inches long, and plant five in a small thumb-pot, having first placed a little moss at the bottom, filling up the pot with pure white sand, plunging

in a good hot-bed ; in the course of two or three days I water copiously. When the plants have made shoots three or four inches long, I select the two strongest shoots on each cutting, rubbing off all the others. As soon as the two shoots have become firm I cut them back to three eyes each, which causes them to form beautiful bushy plants, taking care to nip off the ends of all straggling shoots till September, when the points are all taken off. The plants are repotted, as the roots appear through the bottom, in a very rich, light soil, removing them to the back bed of the stove, giving water in abundance ; by this method bushy plants with drooping, slender branches are obtained. When the plants have done flowering, water is withheld for a week or ten days, when the plants are pruned back to two eyes on each original shoot, and placed in a cool greenhouse or shed. I find if the pruning is delayed, that the eyes at the end of the shoots break first, which causes the long and straggling plants so often seen in collections, whereas, if pruned immediately, the plants are not exhausted. When it is wanted to excite the plants for the following winter, plunge them in bottom heat and supply water, by this method flowers are produced from October to February.

Second method. Take the strongest cuttings that can be got, cut them in lengths each containing four eyes, plant them singly in thumb-pots in rich, light soil, leaving two eyes above the soil ; plunge in a good hot-bed, supplying water. When the shoots have attained one inch in length rub off the weakest ; when twelve or fourteen inches long, remove to the greenhouse to harden ; care must be taken not to break the roots, which will be found, on removal, to have run through the bottom of the pot. Repot them in No. 24, using a good portion of ground bones in the compost ; train them singly to sticks. They will not flower much the first season ; in April following cut down to two eyes, select the strongest shoot, repotting, supplying plenty of water. Keep them in a warm greenhouse, and with proper management they will be about four feet long and three quarters of an inch in circumference. These plants will flower from February to June, and when they are cut down to one foot high and plunged in the stove, will flower again from the end of August to December, which are then thrown away. By this method the largest flowers are obtained, often in clusters of six or ten at the axis of each leaf from a foot above the pot.

CULTURE OF HOYA CINNAMOMIFOLIA.

BY MR. J. SANTON, OF SIDCUP GREEN, KENT.

THIS very beautiful species, bears some resemblance to *Hoya Pottsii* but has much more showy flowers, with very large oval-peltate-shaped leaves. It is a native of Java, easy of culture, and merits a place in every stove. With the following mode of management it succeeds very admirably :—Any time in summer cuttings of it may be struck with facility ; they should be selected from the young shoots that have grown about three inches long, and if these are taken off with an heel, or close to the older wood, and inserted in a pot prepared with sandy peat, having the pot half-full of drainage with broken pots-herds, and plunged in a moderate bottom heat, they will emit roots in

about a fortnight. The young plants should be potted off as soon as they begin to grow each into a forty-eight sized pot, using rough fibre peat with plenty of broken potsherds intermixed, and returning them to the hot-bed. The pot recommended may appear rather large, but it is by no means good policy to restrict the food of young plants, for the course is followed by exactly the same results as are visible on the human frame; a stunted or weakly constitution is engendered that probably is never afterwards removed. As regards the application of water, some degree of caution should be employed, as from the commencement, and onwards for several weeks, the plants by being in a moist hot-bed require less than when at a subsequent period they are growing in the stove or hot-house. If the cuttings have been taken off at an early period, say April or May, they will have filled the first pots with roots, and therefore will require another shift in August or September, according to the growth the plants make. I have found a little *leaf-mould*, broken bones, and charcoal, to be very essential to them at this period, mixed with the composts recommended for the first potting, using pots one size larger to serve them for the winter. For a month after this they should be kept in a close pit, where they will get thoroughly established. At the expiration of that time they may be taken to their winter quarters in the stove, where they will require to be kept dry, only giving water once or twice during the winter. Early in spring they should be again repotted, using pots according to the size of the plants. If the plants made good wood the previous summer, they will now require pots at least eleven inches over, using the compost last recommended. A situation where they may have a temperature of about 65 or 70 degrees will make them grow rapidly, and with a little attention to syringing, handsome plants will be formed by the ensuing June, and then a somewhat drier temperature will be required, and a free exposure to the sun; this will induce the production of flowers. The blossoms are borne in umbels from the axils of the leaves near the base of the shoots. It is important to remark, that the pedicels of these umbels are of *long continuance* and bear flowers for several years, the same as happens to *H. carnosa*, whose flower stems it is well known produce blossoms for several successive seasons; it is therefore of consequence to *preserve* them, and in pruning care must be taken not to cut out any *two years' old wood*, as it is from *this* the blossoms appear, only cutting away such wood as is unnecessary. From the rapid manner in which this species grows, under good treatment, pruning will be required every year, and is best done in the spring when the plants begin to show bloom. As regards the training of these plants it is preferable to allow the stems to ascend perpendicularly, or in a natural manner, till they have attained their greatest height, and then to train them on a trellis in the manner most likely to exhibit the flowers to full view rather than cramp their development by introducing the frame at an earlier period. In training avoid a stiff regularity, which destroys the otherwise easy elegance natural to the plant. While in bloom the specimens may stand in a cool greenhouse, which will prolong their beauty, but at the same time begin to reduce the quantity of water as soon as the flowers are all expanded.

BLUE-FLOWERED HYDRANGEAS.

BY AN AMATEUR.

WHEN the flowers of the *Hydrangea hortensis* begin to decay, and the wood sufficiently hard enough to endure the weather, I place the plants out in some convenient part of the garden, where I let them remain exposed till the last week in February, or first week in March, when I proceed to pot them for bloom. The compost I use is what I have grown my cucumbers in the preceding year, which consists of half the quantity of good loam, a quarter of good spit dung from an old cucumber or melon bed, and a quarter of decayed leaves. This mixture I lay in the compost yard for use. The *Hydrangeas* I bloom in a sixteen-sized pot: I divest the roots of the old mould. From those plants I intend to produce blue flowers, I cut off the long fibrous roots, reducing the ball to the size of a thirty-two sized pot. I take one ounce of oil of vitriol, and, with a quill or strong feather, I touch the roots of two plants all over. The remaining oil of vitriol I mix with a sufficient quantity of mould to pot two plants. When I have potted them, I place them in a shed or some sheltered situation for three or four weeks, until they have made new roots; then I place them in a forcing-house, and take especial care not to let them droop for want of water. The above method I have practised, and without once failing of having them blue for upwards of twenty years. The blue flowers are equally as large as those that are pink.

REMARKS ON THE GENUS TROPÆOLUM,

BY MR. WILLIAM DUBOURG, OF JERSEY.

THIS very beautiful flowering tribe of plants is not grown in quantity or quality as it is most justly entitled to. And feeling, therefore, wishful to promote its more extensive cultivation, I forward the following observations upon some of the species, trusting my object may be, in some degree realized. If they were better grown (as they can be) in general, they would soon be found in every collection of such kinds of flowering plants.

The geographical range of the *Tropæolums* is very extensive: from Mexico on the north to Buenos Ayres and Chili on the south; but the tract of country from which we possess the most species is the western slopes of the Andes of Peru and Chili, where the most of them appear to flourish in rocky and bushy places, the borders of woods, &c., where the soil is commonly moist, and the weather cool during the growing period, and where during the summer the heat is powerful, so that the growth of the stronger species is checked, and the production of flowers consequently increased.

This point should be particularly attended to in the cultivation of *T. tuberosum*, *moritzianum*, *lobbianum*, and others of similar habit, as otherwise in this moist climate the growth is so great that no flower buds are formed until too late in the autumn to expand, and thus we are disappointed with plants of great beauty. But if forward plants

of this description are turned out in a poor soil and hot exposure, and kept moist in the beginning of the season, and afterwards left to the natural supply of the atmosphere, a bloom of many months' duration will be obtained, highly rewarding the cultivator for his trouble. The last-named species is one of the most lovely plants grown, either indoors or out, and ought to be one of every collection. It is easy of culture, grows freely, and blooms profusely.

T. tuberosum is seldom seen in flower, and is discarded by many on that account, it is, however, a very handsome species, and if grown according to the hints given above will not be thrown away so readily. I have known it to succeed best and flower most profusely in a pure gravel. Indeed, the whole order will be benefited by care being taken that they do not grow too luxuriantly when free flowering plants are wanted.

Tropæolum tricolor, *T. brachyceras*, and *T. azureum*, succeed well in a good loam, rendered free, but not too light, with sand, leaf-mould thoroughly decayed, and a little peat. Judging from the soil adhering to imported roots of these plants, they appear to grow naturally in a free yellowish brown loam, in which occur glittering yellow particles, I believe, of mica. Peat should be but *sparingly* used, or only *weak plants* will result. Damp must be particularly guarded against, and the freest circulation of air kept up that the weather will permit; but directions like these, and also those respecting drainage, refer with equal force to every plant we cultivate, and of course will always be properly attended to by every one wishing to arrive at anything approaching excellence. I think that when the rarer tuberous-rooted *Tropæolums* become sufficiently common to allow the experiment being tried, that most of them will be found much hardier than is supposed at present. Plants of *Chymocarpus* (*Tropæolum*) *pentaphyllum*, turned out against a sunny wall, in the course of the summer become very attractive objects, whilst the increase at the root is so great that I really wonder this fine plant is not seen in every cottager's garden. I have little hesitation in saying that most of the tuberous species will do better if planted out near a wall, than if kept in a pot; and most of them seed freely, especially *T. brachyceras*.

THE CALCEOLARIA.

BY PHILO, OF MIDDLESEX.

DURING the last three seasons very great improvement in this flower has been effected by the growers who offer them for sale at Covent Garden Market, London. I have long been an admirer and grower of this pretty race of flowers, and I beg to add, that very many of the varieties sold at that market for from one to two shillings each, are equal to any I ever saw of the half guinea priced ones. There is perfection in form, with great beauty and diversity in colour and marking, I think quite unequalled by any other I ever saw. These plants are offered by hundreds, if not even thousands, from the early part of April up to July. I obtained from the most extensive grower

who attends that market his method of cultivation. He does not provide his stock of plants for sale from cuttings or slips of the previous years' blooming plants, but raises seedlings every year which bloom the following spring and summer. His system of cultivation is as follows :—

“ When my plants begin to bloom, I am careful to select, at an early stage of their blooming, some which produce flowers of the best form, as well as striking distinction in variety of colours. These plants are removed to a low-roofed greenhouse, which is situated a hundred and eighty yards from the house where my general collection is, and I have fine wire blinds at the openings for admission of air, which prevents bees from entering with farina from any inferior-formed flowers. I have only good shaped ones, and each successive year's seedlings produce only fine-formed flowers.

“ From such selected plants I save seed, and early in August sow it, placing the pots in a shady situation, in a vinery, care being taken not to allow the surface to become dry, or the small seeds will perish, for when once they are softened by vegetation having commenced, and then allowed to be dry, they are immediately destroyed. Towards the end of September the plants are usually large enough to be potted, into small pots. After being potted I place them in a pit frame where there is a gentle moist temperature, and shade them ; here they remain for a week or ten days. when they are removed into a cold pit frame, where they are about a foot from the glass, and can have a free admission of air, as it is only necessary just to protect them from frost. The pit is provided with hot water piping, so that in very severe weather during winter the plants can be protected from injury, either from frost or being too damp. The first week in January I repot the plants, into 48-sized pots, in which they are brought into bloom, and sent to market. If, however, I wanted to have extraordinary sized plants, I should repot again the first week in March, into nine or ten inches wide pots. I give a liberal drainage, and in the following compost they grow very vigorously. One half charred turfy loam, one quarter of rotten leaf mould, and one quarter of turfy peat, with a liberal sprinkling of silver sand, and bits of charcoal. When they are potted in January, I have them placed in the *ashes floor* of the pit frame, where the roots are kept *cool*, which is essential to their well-doing. Air is given on all favourable occasions, to keep the plants in robust growth. About the middle of February I begin to sprinkle the plants overhead with soft water ; this is continued during all their subsequent growth till they begin to bloom. Once or twice a week they are syringed over head at first, and as spring advances it is done every day, towards evening. The plant delights in being sprinkled overhead, and to syringe them at the under side of the leaves occasionally is beneficial. Green fly is a great pest to these plants, and on the appearance of even a single insect let the stock be well fumigated. If this is not attended to, deformed flowers and foliage is certain to be the result. When the blossoms begin to expand, I have the roof shaded to keep the sun from shining upon the flowers, and having the plants in a low double-roofed house, similar to a heath house, which has

openings on both sides ; I give a free admission of air. I am careful to give a liberal supply of soft water at the roots, so that the plants do not flag, for if they do, the flowers shrivel and never regain their firmness or proper form.

" If it is desirable to perpetuate any particular kind, cuttings readily strike, especially towards end of summer and autumn. Such plants never look as well as seedlings of first bloom. These latter are readily raised, seed produced abundantly, and the plants are much handsomer. To raise and grow a stock only by cuttings, never yet repaid any person to supply the London Markets. The difficulties and attention, requisite to perpetuate old plants of this show class of *Calceolarias* is always extensive, whilst the seedlings, being but for the first season's, bloom, are readily provided, and when done blooming are thrown away to make room for another progeny."

Such is the process, and it claims the attention of every admirer of this lovely tribe of flowers ; and how pleasing to attend to the raising of seedling flowers which require so little attention, and when every plant will have fine-formed flowers.

MISCELLANEOUS SECTION.

HORTICULTURAL SOCIETY'S GARDEN.—Some experiments in regard to killing insects have lately been made, in the plant department. A mixture of Cayenne Pepper and Tobacco has been tried for the destruction of green fly, in the various pits and houses, and although the fumes were so powerful when the structures were filled with them as not to be endured by the operator for more than one or two minutes, and although the fumigating was performed in the evening, and the house shut up close until the following day, yet, on examination after fresh air had been admitted for a few hours, only a few of the insects appeared to have been destroyed. The greater portion of them were in a state of stupor, and after fresh air had been admitted for some time they perfectly recovered. The application did no injury to the foliage or flowers of the plants submitted to it, and its smell is less offensive than that of tobacco. If Cayenne and Tobacco, however, have failed in destroying green flies, Clarke's preparation for killing mealy bug has succeeded perfectly. It has been tried on various plants at different times, and has invariably answered. It must, however, be applied on three or four different occasions, before the plants are entirely freed from insects. None of the plants operated on were in the least injured in the foliage. In the kitchen garden superphosphate of lime, guano, and guano with sulphuric acid, have been tried as manure for Early York Cabbages ; but with what result yet remains to be proved. A simple, but in all probability a very important invention for ventilating glasshouses in cold weather, by Mr. Sibthorpe, is in operation in the early Vinery in the experimental ground. It consists of a wooden box about four inches deep, inverted on about half the length of a hot-water tank with which the house is heated. Both ends of this box are open ; the external air enters one end through a ventilator, is warmed in its passage along the

box on the tank, and is permitted to escape at the other end of this drain into the interior of the house, by which means fresh air is furnished in a warm state, and it will be seen that, if it is desired, it may be easily moistened by having evaporating pans in its course along the tank. Its circulation is so rapid that in a manner it Polmaises the house; therefore, although it has not yet been sufficiently long in operation to test its real value, it is not difficult to foresee the beneficial effects which must result from it.

COMPOST FOR CAMELLIAS.—This season I have seen the most healthy, vigorous, and best bloomed collection of Camellias (several hundreds) I ever saw, not *nearly equalled* by any London nursery collection, or the collections of any private establishment I have seen around London, and I have seen *all* the celebrated ones. Equal parts of turfy loam with all its fibre from a meadow, turfy peat with plenty of fibre, and another part composed of well-rotted decomposed cow-dung, pieces of charcoal, crushed bones, and river sand. These materials were well incorporated together, broken with the spade, but not sifted. A liberal drainage was given, so that the water passed away freely. Such vigour, health, and bloom I never saw elsewhere.—*Clericus.*

COMPOST BEST SUITED FOR HARD-WOODED PLANTS.—Mr. Ayres gives the following particulars relative to this matter in the Magazine of Botany for the last month. He has had considerable experience in plant growing, and his remarks are useful ones.

“*Soil.* This, for hard-wooded plants, consists of peat, procured from upland situations; and, in selecting it, great judgment is necessary, for it is not sufficient to say procure it from Wimbledon Common, Epping, or Wrotham, for though peat of the finest possible quality may be found, it is not unusual to see great rubbish carted from each of these places; therefore select with care, for it is better to spend a few hours in selecting good soil, than in carting home that which is worthless. The best time to procure soil is in the autumn, and it should then be placed in ridges, and in such a manner that while the rain is penetrating the mass, the air has free access between each turf. Thus prepared, it will be fit for use in a few weeks; but if it can be prepared for twelve months before using, it will be so much the better—indeed, those who intend to grow plants properly, must always keep a good stock of properly aerated soil on hand. Peat soils differ in texture; some is hard, as that from Wimbledon and Wanstead, while that procured from Wrotham in Kent, and Spring Park near Croydon, is light and spongy, but very rich. In the light peat, plants grow very vigorously for a time, especially if it is used in a rough state, but it soon gets sour, and the plants die off almost without a moment's notice. In the hard peat, on the contrary, plants grow moderately, but that is poor, and hence, if the plants suffer for the want of water once or twice, the leaves turn yellow, and assume a sickly appearance, from which it is difficult to recover them. I therefore recommend the hard and soft peat to be used in equal proportions, selecting it with the greatest care, and rejecting every portion which does not appear perfectly clean and healthy.

“ Break the soil into small pieces not larger than a hazel nut, and pass the whole through a sieve with half-inch meshes, and take care to make every portion pass through. Then add sand and charcoal and potsherds broken small sufficient to secure the porosity of the mass, and have some of the material standing by so that an additional quantity may be added to such plants as require it. Quick growing, soft-wooded Heaths do not require so much sand as the *aristatas*, *oblatus*, and the like. Some of the more free growing New Holland plants will be benefited by having a little nice mellow turfy loam added to the peat and sand. Pimeleas of all kinds, but more especially the fast-growing ones delight in loam, so do Polygalas and Bossiæas, and even Boronias are not injured by a little of it. Leaf mould I rarely use, not even for soft-wooded plants, as it is full of insects, and unless formed of good clean leaves is rarely what it ought to be.

“ The use of rough turfy soil has been carried to a wild extreme, and has caused the death of more plants than any other thing I know of, for though the plants may grow vigorously for a time, the rough soil, as decomposition proceeds, is sure to become a sour soapy mass, in which the roots perish the first time they get a little too much water. Mechanical action, which was the object of the use of rough soil, may be attained in other ways, and it is much better to depend upon potsherds and charcoal broken small and mixed with sand through the mass, to secure porosity, than upon the interstices between large lumps of soil. If the soil is broken small it is the same throughout, and not a stratum of soapy sodden soil in one part of the pots and a sand heap in others, and hence the roots make steady and regular progress.

“ Now what is good potting? A few years back we should have been told it consisted of tumbling the soil into pots in as large lumps as possible; but this was an error which I believe most gardeners have learned to avoid. The first requisite in good potting is properly prepared composts; the second, clean porous pots; and the third, soil made as firm as it can be by the use of the fingers and thumb, but without resorting to the ramming system of compression.”

THE BEAUTIFUL IN GROUND-SURFACE.—Artists and men of taste have agreed that all forms of acknowledged beauty are composed of *curved lines*. The principle applies as well to the surface of the earth as to other objects. The most beautiful shape in ground is that where one undulation melts gradually and invisibly into another. Every one who has observed scenery where the fore-ground has been remarkable for beauty, must have been struck by this prevalence of curved lines; and every landscape gardener well knows that no grassy surface is so captivating to the eye as one where these gentle swells and undulations rise and melt away gradually into one another. Some poet, happy in his fancy, has called such bits of grassy slopes and swells “earth’s smiles;” and when the effect of the beauty and form of outline is heightened by the pleasing gradation of light and shade, caused by the sun’s light variously reflected by such undulations of lawn, the simile seems strikingly appropriate.

A flat or level surface is considered beautiful by many persons, though it has no beauty in itself. It is, in fact, chiefly valued because

it evinces art. Though there is no positive beauty in a straight or level line, it is often interesting as expressive of *power*, and we feel as much awed by the boundless prairie or desert, as by the lofty snow-capped hill. On a smaller scale, a level surface is sometimes agreeable in the midst of a rude and wild country, by way of contrast, as a small level garden in the Alps will sometimes attract us astonishingly, that would be passed by unnoticed in the midst of a flat and cultivated country. Hence, as there are a thousand men who value power, where there is one who can feel beauty, we see all ignorant persons who set about embellishing their pleasure-grounds, or even the site for a home, immediately commence *levelling* the surface. Once brought to this level, improvement can go no further, according to their views, since to subjugate or level is the whole aim of man's ambition. Once levelled you may give to ground, or even to a whole landscape, according to their theory, as much beauty as you like: it is only a question of expense. This is a fearful fallacy, however: fearful oftentimes both to the eye and purse.

It is not less fearful to see a fine varied outline of ground utterly spoiled by being graded for the mansion and its surrounding lawn, at an expense which would have curved all the walks, and filled the ground with the finest trees and shrubs, if the surface had been left nearly, or quite, as nature formed it. Not much better, or even far worse, is the fancy many persons have of *terracing* every piece of sloping ground—as a mere matter of ornament,—where no terrace is needed. It may be safely said, that a terrace is always ugly, unless it is on a large scale, and is treated with dignity, so as to become part of the building itself, or to be supposed, more properly, to belong to it than to the grounds—like the fine architectural terraces which surround the old English mansions. But little gardens, thrown up into terraces, are devoid of all beauty whatever,—though they may be rendered more useful or available in this way.

The surface of ground is rarely *ugly* in a state of nature, because all nature leans to the beautiful; and the ceaseless action of the elements goes continually to soften and wear away the harshness and violence of surface. What cannot be softened is hidden and rounded by means of foliage, trees, and shrubs, and creeping Vines, and so the tendency to the curve is always greater and greater. But man often forms ugly surfaces of ground by breaking up all natural curves without recognizing their expression, by distributing lumps of earth here and there, by grading levels in the midst of undulations, and raising mounds on perfectly smooth surfaces; in short, by regarding only the little he wishes to do in his folly, and not studying the larger part that Nature has already done in her wisdom.—*A. J. Downing.*

GARDENIA FORTUNI.—This beautiful stove evergreen shrub is deserving of extensive cultivation, as it is doubtless one of the finest plants introduced into this country. It is exquisitely fragrant, and therefore very suitable where fragrant plants are required. Its fine foliage gives it an interesting appearance at all seasons of the year, and it contrasts well during the blooming period with its pearly-white blossoms. There is no great difficulty in the culture of this plant. It

may easily be propagated from cuttings of the half-ripened wood, which should be inserted under a bell glass in silver sand: the pots plunged over a hot-water tank in a temperature of 80° Fahr., and, as soon as rooted, potted in three-inch pots in sandy peat. Presuming that the plants are well rooted early in the spring, they should be repotted into five-inch pots, using equal parts of peat, leaf mould, and loam, with a liberal admixture of silver sand, and placed in a warm situation near the glass—the pots partially plunged. About a fortnight after they are potted they should be stopped, and a warm humid atmosphere maintained, ranging from 70° to 90° temperature during the day, according to the amount of solar light, which may be allowed to fall to 60° during the night. As the plants advance in growth more air must be admitted, to induce a robust and vigorous growth. When the young shoots have attained six inches in length, they must be stopped again, and the same treatment pursued as before, till the decline of solar heat renders it necessary gradually to withdraw the stimulus necessary to produce accumulative growth—as bottom heat, &c. The daily winter temperature should be from 60° to 70°, while 55° to 60° is amply sufficient nocturnally during the season of repose. The plants must be potted as they require it, using the materials in a coarser state than previously, to prevent any stagnation of water in the soil, which is highly injurious, causing the foliage to assume a yellowish hue, and a speedy extinction of the vital energies. The flowers are produced on the extremities of the young stock; and their production is dependent, in a certain degree, on the maturation of the wood. After the flowering season is past, they must be potted again, and the strongest shoots stopped to preserve the specimen in a regular form. Great attention must be paid to prevent them from sustaining injury from insects, as on this care much of the beauty of the plant depends. — *Wm. Rumley, Chatsworth. (Gardener's Journal.)*

NATIONAL TULIP EXHIBITION.—The annual exhibition took place on Thursday, May 27th, at the Town Hall, Birmingham, and brought together a goodly gathering of both flowers and cultivators. The general attendance was also large. About two thousand blooms were sent, and about from thirteen to fourteen hundred were staged. The labours of the judges were, therefore, very onerous, occupying between five and six hours. Thirteen pans were entered for the *gold medal*, so that the competition was a strong one. It was worthily won by T. Houghton, Esq., of Hems Hall, near Nottingham, whose flowers well merited the distinction assigned to them. The pan included well-defined blooms of Coupe de Hebe, Royal Sovereign, and Captain White. The winning pan in class A contained superior specimens of Heroine and Royal Sovereign; the second, of Lord Denman and Queen Victoria; and the third, of Queen Charlotte; Captain White being the only flower worthy of notice in the fourth. The prize collection in class B presented Strong's King and Duke of Devonshire, in fine strain. The pan which obtained the second prize contained good examples of Pilot, Thalia, and the Byblømen Maid of Orleans; the best flower in the third pan was Princess Royal; the fourth including splendid blooms of Zanzio and Polyphemus. The selection of the Premier Feathered

flowers was most judicious; and in the adjudication of the premiums in the other classes for single specimens, equally satisfactory selections were made. Of the Flamed Bizarres, Captain White, Pilot, and Donzelli were in good stain. In the Feathered Bizarres, Vivid ranked very high. Maid of Orleans and General Bournaville (the last named coming from Mr. Hartland, of Tipton) stood at the head of the Feathered Byblœmens class, and deservedly so. The Flamed Byblœmens formed a good class, of which Queen Charlotte was the most noticeable flower. The judges had great difficulty with the Feathered Roses, from the quantity exhibited—Napoleon, a new flower, and Bion, taking the leading prizes in the list. The Flamed Roses were inferior; and in Class F, for Flamed or Beamed Flowers, the entries were of trifling value. The following were the prizes awarded:—The National Tulip Society's Gold Medal, value 7*l.* 7*s.*, for the best six *Rectified Flowers*, one of each class; T. Houghton, Esq., Hems Hall, Nottingham, for Royal Sovereign, Coupe de Hebe, Captain White, Queen Charlotte, Heroine, and Triomphe Royal. Class A.—Six Rectified Tulips, one of each class: 1st prize, Mr. Godfrey, Chellaston, for Captain White, Van Amberg, Royal Sovereign, Maid of Orleans, Heroine, and Triomphe Royal; 2nd, Mr. C. Turner, Slough, for Lord Denman, Arlette, Polyphemus, Queen Victoria, Triomphe Royal, and Royal Sovereign; 3rd, Mr. T. Adams, Derby, for Captain White, Unknown, Queen Charlotte, Heroine, and Triomphe Royal; 4th, Mr. W. Marsden, Derby, for Captain White, Seedling never exhibited, Ambassador, Sarah Ann, Lady Jane Grey, and La Belle Annette. Class B.—Twelve Dissimilar Tulips, four of each class: 1st prize, J. Willmore, Esq., Edgbaston, for Lady Flora Hastings, Strong's King, Clark's Thalia, Earl Douglas, Triomphe Royal, Heroine, Duke of Devonshire, Aglaia, Washington, Waterloo, Camuse de Craix, and Friend; 2nd, Mr. C. Turner, Slough, for Thalia, Madame Vestris, Pilot, Duke of Devonshire, Triomphe de Leslie, King, Claudiana, Maid of Orleans, George Glenny, Polyphemus, and Heroine; 3rd, Mr. J. Edwards, Holloway, for Purple Perfecta, Junius Brutus, Triomphe Royal, Priam, Violet le Grand, Rose Astonishing, General Bournaville, Catalini, Princess Royal, Miss Catherine, Hamlet; 4th, Mr. W. Lymbury, Nottingham, for Captain White, Lord Milton, Donzelli, Lord Sandon. Seedling, Mrs. Lymbury, Mantua, Ducal, Baquet, Prince Eli, La Vandikken, Sarah, Bacchus, and Polyphemus. Class C.—Nine Dissimilar Tulips: 1st prize, T. Houghton, Esq., for Heroine, Abercrombie, Princess Royal, Emperor of Austria, Victory, Queen Charlotte, Royal Sovereign, Triomphe Royal, and First-rate; 2nd, Mr. J. Parkins, Derby, for Walworth, La Bien-Aimée, Diamond, Heroine, Venus, Aglaia, Sovereign, Britannia, and Shakspeare; 3rd, Mr. T. Adams, Derby, for Royal Sovereign, Heroine, Maid of Orleans, Pilot, Triomphe Royal, Enchantress, Captain White, Princess Royal, and Cornelius; 4th, Mr. C. Turner, Slough, for Princess Royal, Midland Beauty, Glory of Abingdon, Lady Stanley, Triomphe Royal, Purple Perfecta, Glencoe, Gibbons No. 2, and Albion. Class D.—Best Feathered Flower in each class, selected from the classes.—Feathered Bizarre;

Premier prize, Mr. J. Parkins, Derby, for Charles the Tenth. Feathered Rose: Premier prize, Rev. S. Cresswell, Radford, for Agnes (seedling). Feathered Byblœmen: Premier prize, Rev. S. Cresswell, for Prince of Wales. Class E.—Single specimens—Byblœmen, Feathered: 1st prize, Mr. Thorniley, Heaton Norris, for Maid of Orleans; 2nd, Mr. T. Adams, for Princess Royal; 3rd, Mr. C. Spencer, for Victoria Regina; 4th, Rev. S. Cresswell, for Sarah; 5th, Mr. Ackerley, for Salvator Rosa; 6th, Rev. S. Cresswell, for Kosciusko. Byblœmens, Feathered and Flamed: 1st prize, T. Houghton, Esq., for Princess Royal; 2nd, Mr. Thorniley, for Queen Charlotte; 3rd, Mr. J. Hartland, Tipton, for General Bournaville; 4th, Mr. Parkinson, for Lord Vernon; 5th, Mr. Dixon, for Rubens; 6th, Mr. Astlee, of Derby, for Surpasse le Grand. Bizarres, Feathered: 1st prize, Mr. R. Dickson, Manchester, for Charles the Tenth; 2nd, Mr. C. Thorniley, for Vivid; 3rd, Mr. Parkinson, Derby, for Magnum Bonum; 4th, Mr. R. Dixon, Manchester, for Cobert; 5th, Mr. Spencer, Chellaston, for Chellaston; 6th, Rev. S. Cresswell, for Catafalque. Bizarres, Feathered and Flamed: 1st prize, Mr. Godfrey, for Captain White; 2nd, Mr. W. Artle, Melbourne, for Pilot; 3rd, Mr. Frearson, Nottingham, for Lord Milton; 4th, Mr. J. Edwards, London, for King; 5th, J. Willmore, Esq., for Donzelli; 6th, Rev. S. Cresswell, for Polyphemus. Rose Feathered: 1st prize, Mr. C. Spencer, for Heroine; 2nd, Rev. S. Cresswell, for Napoleon; 3rd, Mr. R. Dixon, for Baquet; 4th, Mr. R. Dixon, for Bion; 5th, Mr. Ackerley, for Anastasia; 6th, Rev. S. Cresswell, for Lady Crewe. Rose Feathered and Flamed: 1st prize, Rev. S. Cresswell, for Vicar of Radford; 2nd, Mr. Parkinson, for Aglaia; 3rd, Mr. Parkinson, for Triomphe Royal; 4th, Mr. W. Lymbury, for Grand Rose Desire; 5th, Mr. Godfrey, for Triomphe Royal; 6th, Mr. Astlee, for Camilla. Class F.—Flame or Beam: 1st prize, Mr. G. Mills, Alderly, for Holmes's King; 2nd, Mr. S. Lakin, Derby, for Oriflamme; 3rd, Mr. S. Lakin, for Pilot; 4th, Mr. Turner, Slough, for Gibbons's No. 4; 5th, J. Willmore, Esq., for Lord High Admiral; 6th, Mr. Ward, Nottingham, for Duke of Clarence.

To the Tulip Show was added an extraordinary exhibition of plants by the Handsworth and Lozells Floricultural Society, which also proved to be of marked excellence.

SUPERB PELARGONIUMS.—The following varieties exhibited in the collections at the Chiswick, Surrey Gardens, and Royal Botanic Shows, were peculiarly excellent. They are entitled to a place in every collection of this fine race of flowers. Ajax, upper petals purple-crimson margined with scarlet, the lower petals a rich purple-rose. Petals of thick substance and good form. Rosamond, light rose, with a pure white centre, strikingly handsome, and very attractive. Conspicuum, upper petals a rich dark crimson margined with fiery red: lower petals a pretty blush, with a crimson spot on the centre of each; the centre of the flower white tinged with violet, very fine. Magnificent, a vivid crimson-scarlet with large dark blotches. Petals of thick substance and good form. A noble growing variety. Ocellatum (eye-like), upper petals a rich crimson shading off to a pretty rose; lower petals

bright pink, each having a dark crimson spot in the middle. Flower, a white centre. A very handsome variety. Nonsuch, upper petals having a small but very dark spot shading off to crimson, and edged with pink; lower petals bright-pink, each having a very striking spot of dark crimson at the middle. One of the most beautifully striking varieties. Mont Blanc, "No. 2," pure white with a small clear scarlet spot on each of the upper petals. Pearl, pure white, with crimson spot on each upper petal. Virgin Queen, pure white, with dark spot on upper petals; fine form. Loveliness, upper petals very rich dark, edged with bright pink; lower petals pink, with a crimson spot on the middle of each. Centre of flower pure white. A very handsome variety. Gulielma, upper petals as well as lower of a plum-purple; the centre white, very striking, and fine. Alonzo, upper petals a rich dark purple edged with scarlet; lower petals a rich rose. Petals of good substance and form. Emily, upper petals a rich velvet edged with crimson; lower petals a deep pink, with a dark spot at the middle of each. Centre white. Very pretty. Prince of Orange, upper petals *bright orange-scarlet*, with a small velvet spot; lower petals a bright scarlet; very distinct and showy. Magnet, the flower is of a high coloured scarlet-crimson, and the upper petals having a large black blotch edged with vivid crimson. Very superb. Star, upper petals large dark crimson blotch, edged with pink; lower petals bright pink. Centre white. Very pretty. Governor, flower a bright rosy-purple, the upper petals having a dark blotch; the centre white. Very showy. These were the best varieties in the collections; distinct, fine formed, and much admired, and worth a place in every greenhouse.

Fancy Pelargonium.—Gaiety, the flower is of a dark mulberry colour, edged with white; good form. Celestial, upper petals rosy-crimson edged with white; lower petals white, veined with rosy-purple. Defiance, rich dark velvet edged with light, and centre white; fine form. Hero of Surrey, rich dark crimson-velvet edged with white; fine form, and pretty. Triumphant, *bright rosy-scarlet* edged with white; fine form, and very handsome. Caliban, upper petals plum colour edged with light; lower petals mulberry with light edge; fine form. Formosissima, upper petals crimson tinted with violet, and white edge; lower petals white, belted with rosy-crimson; fine form. Aveiron, this year's seedling, upper petals very dark edged with white; lower petals light, with a broad crimson band across the middle of each. Centre white. Fine form, and very pretty. The above are the best of the newest varieties, and merit a place in every collection. There were some of the older varieties which were very fine and showy, such as Jenny Lind, Exquisite, Delight, Anais, Stataiskie, Modesta, and Magnifica.

Mr. Hoyle exhibited twelve of his seedlings in one stand; they were not of the fancy class. Zaria, the ground was a pretty buff-white. Upper petals having a large blotch of deep chocolate; each of the lower petals had a small spot of the same colour. Petals thick; form excellent. Astræa, upper petals very dark edged with white; lower petals rose. Centre pure white. Petals thick, and of fine form. Dion, upper petals dark maroon, with a broad belt of scarlet; lower petals

scarlet. Excellent form. Kana, upper petals dark, edged with fiery red; lower petals pink, with a dark spot in the centre of each. Fine form, and very showy. Leonora, upper petals dark, edged with white; lower petals light rose; centre white. Fine form.

Attraction.—This is a new hybrid raised by Mr. Kinghorn, something in the way of his *Flower of the Day*, sent out by Messrs. Lee; it has a beautiful variegated foliage; green is the ground colour, edged with white, but there is a dark-purplish horse-shoe mark divides the green and the white. It is a striking variety, and the flowers are of a salmon-red colour. Kingsbury Favourite, the flowers are very similar to those of Lucia-Rosea, with light green leaves having a dark horse-shoe mark.

PROPAGATION OF THE FANCY CLASS OF PELARGONIUMS.—Mr. Robinson, gardener to J. Simpson, Esq., of Pimlico, London, is a very successful cultivator and exhibitor of this class of plants. The particulars of his practice in propagating them from cuttings he describes in an article inserted in the *Florist*, from which we make the following extract:—

“I know of no better season than the present (February) for taking cuttings. Select some good tops from the very best sorts that are out, get as many thumb-pots as you will require for the purpose, fill them with rich turfy mould, and put one cutting into each pot; but previous to filling the pots, let them be well drained with broken charcoal or oyster shells, either will do. Then with your pencil, or a piece of round stick, make a hole an inch deep, fill the said hole with silver sand, then put in the cutting, and give the pot a slight blow on the potting board, to settle it firmly in the soil; dip a piece of stick, or your pencil into some water, and hold it downwards, in order that three or four drops may fall from the same, close to the side of the cutting; this will set the whole closely together, and the quantity of water will be quite sufficient for three or four days; after that, add a little more in a similar way, or with a fine-rosed watering-pot, as may be thought needful. When you have finished this part of the work, let all the pots be plunged into a slight bottom heat, say from 65 to 70 degrees; give a little air in the day-time, to prevent the cuttings from damping off; and as soon as they are rooted, they are established plants; not like some of the nurserymen’s poor sickly things, from which it is impossible to make a specimen fit for exhibition, and which you must grow along in the best manner you can, till you can get a cutting from them, at a great loss of time.

“I do not recommend the practice of putting a great quantity of hard-wooded cuttings into one pot; two out of three will take root, when you spoil several in getting them apart; strong cuttings struck singly in pots, as directed, and well managed after they are rooted, will make fine specimens by June or July the following season. I have exhibited plants in July, two feet in diameter, that were taken off the parent plant shown at Chiswick in July the previous year; but you will not find many of the sorts do this; most of the varieties will, however, make good specimens by the time stated.

CYCLAMEN PERSICUM.—I observe a correspondent complains, that

"for several years he has purchased plants *in profuse bloom*, but he never yet succeeded in blooming one well afterwards." He has omitted to inform us how he managed the plant after it had done blooming the season when he purchased it. I beg however to state, that I have grown and bloomed numerous plants of it most successfully during the last four years, not, that I recollect, ever having a single failure.

The plants (five) which I purchased four years ago have been retained in the same pots up to the present time, and the only alteration has been as follows:—As soon as the plants have done blooming, I gradually withhold water, and the tubers go to rest, and are placed on a shelf behind the stage in the greenhouse, where they are kept dry, shaded from the sun, and have a free admission of air. About the middle of September I turn out the ball *entire*, and carefully loosen the crocks which are at the lower portion of the ball and an inch or two of the soil; also take a little of the top part of the ball at the side, but in doing this I do not loosen the roots. A little fresh compost being put into the pot, I carefully place the ball upon it, and add a portion of soil at surface. This being done I give a good watering, the tubers begin to start into growth; water is afterwards gradually given as the plant increases in growth. The flowers soon push forth from the crown *abundantly*. I am careful not to disturb the roots of the tuber, and to retain the plant in the same pot. I find if the tuber has a large pot, it produces too much foliage, and the fewer flowers are borne in proportion.—*Thomas Joyce, St. John's Wood Place.*

THE OLD DOUBLE YELLOW ROSE.—I have a plant of this very fine rose growing on a north aspected border in a good sandy loam, which has bloomed charmingly for the last twelve years, and not failed on any one season. I water it well from the time it begins to push, once a week with strong manure-water till the flowers begin to expand, and where there are several flower-buds near together I thin them. The result of this treatment is fine *large flowers*, well opened and perfect in form.—*An Ardent Admirer.*

ACHIMENES TO BLOOM IN WINTER AND SPRING.—You have often recommended the culture of the strong upright growing kinds in your remarks on the superb plants grown in the Royal Gardens of Kew. I was thus induced to grow some for ornament in the establishment where I am flower-gardener, and through the entire of last winter, up to the middle of May, I had fine blooming plants of *Achimenes picta*, *pedunculata*, *hirsuta*, along with several distinct and handsome varieties of *pedunculata*. Some of the plants were four feet high, and bloomed most profusely. It was August, 1851, when I resolved to grow some for winter, I had not any tubers in a dormant state, nor young plants, I therefore put off a number of cuttings, and struck them in a hot bed under bell-glasses. I potted them singly in sixty-sized pots—encouraged their growth, and at the latter part of November, I planted out five plants in a shallow pan, six inches deep, and half a-yard across. I had an inch of broken crocks, over which I spread some moss to prevent the soil being washed in among the crocks, I used a compost of sandy loam, sandy peat, leaf mould, and one year old decomposed cow-dung

in equal portions, with a liberal sprinkling of bits of charcoal. In this the plants were quite astonishing specimens; I gave one good watering of liquid manure every week, and soft rain-water on all other occasions. Before the flowers opened I used to syringe the plants overhead every day, and the under side of the leaves twice or thrice a week. This prevented the red spider. In placing the plants in the pan, I put one in the centre, and the other four at equal distances from each other. I had a few plants grown in deep pots, but they did not flourish near so well as those in the pans. The roots like to run near the surface. The time to put cuttings off (August or September,) is at hand, and it is well worth attention. Plants raised from cuttings bloom in winter, but plants from tubers being potted in August, scarcely bloom at all. I had a tuber of *pedunculata* last August, and gave the plant every encouragement, but I could not get the plant to bloom.—*Harleyford House, Devon.*

LESCHENAULTIA FORMOSA.—*Young plants* should not be allowed to bloom, for flowering at that early stage, prevents the plants from growing. Pinch off the blossom buds, and the growth of the plants will be rapid. They should always be kept *bushy*, stopping the leads will enhance that. Plants should be kept near the glass, and have a free air. When repotting is necessary, keep the ball entire, so that the roots be not damaged by it, where the soil is free from roots it may be picked out, and its place supplied by new compost. The compost that this plant flourishes in is, one part fibry peat, one part light loam, and one part of well decomposed leaf mould, the whole having a liberal sprinkling of silver sand, bits of charcoal, and broken pot.

A liberal drainage is essential to success. As well as the compost being in a rough state, not sifted. In summer keep the plants in an open frame, and place each on a bed of ashes; a liberal admission of air *around* them must be given. Prevent the plants being *drawn* up. If the sun is kept from shining upon the sides of the pots by moss being laid between, each pot may be placed upon a pot turned upside down. The coal ashes, or moss, should be watered every other day in hot weather to keep it cool for the roots. Get the new shoots well ripened by the beginning of September, a full exposure of the tops to sun and air from July is essential to effect vigorous maturity. In winter an airy, *dry* part of the greenhouse is necessary to preserve the plants. Guard against having the soil *dry as dust*, or *soddened* with excess of water. A day or two of such casualties will be sufficient to destroy the plant. The proper medium, *just moist*, must be kept, and a liberal dry air, then success is certain.—*A Foreman of a London Nursery.*



FLORAL

OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

JULY is proverbially a hot and dry one, it will therefore be highly necessary, during the continuance of dry weather, to administer copious supplies of water. This should be done towards the evening of each day, because the plants have then time to absorb the water gradually, and appropriate such portion as contributes to their well-being. It is only in extreme cases that water should be given in the morning, because it is then so quickly exhaled from the soil, as well as the leaves, that its refreshing and nutritive properties are almost wholly wasted. Rain-water is best, or that from an exposed pond or tank. Where beds of plants have been repeatedly watered through a rose, the surface of the soil will probably have become *crusted* and almost *impervious* to moisture; consequently they ought to be stirred over occasionally with a small fork. A few annuals, as Mignonette, &c., may now be sown to bloom in the autumn, also biennials to bloom next year.

FLORISTS' FLOWERS.—*Auriculas* and *Polyanthus* should be kept in the shade. At this season of the year the plants are often attacked with green fly, dip the plants in a solution of tobacco-water. *Tulips* will have perfected their growth, and should now be taken up, as if allowed to remain too long it invariably acts prejudicially on the bulb. *Ranunculuses* will require to be taken up as soon as their foliage has become withered and dry. *Pinks* may still be piped. *Carnations* and *Picotees*: As the pods are fully formed and ready to open, secure them round with a ring of India-rubber, gutta-percha, or bass, to prevent their bursting on one side. When blown, they should be shaded. Never suffer the plants to flag for want of water. Proceed with layering. *Dahlias* will require *thinning out* freely as they advance in growth. If sprinkled overhead with soft water late in the evening with a fine rose or syringe, their luxuriance will be greatly promoted. *Pelargoniums* that have shed their flowers should be cut down, disrooted, and potted in smaller pots, keeping the plants for a week in a close frame, to assist them in developing their new shoots. *Roses* may now be budded, moist weather being best for the operation. It is of importance that there should be a resemblance between the bud and the stock as to the vigour of vegetative growth, in order to ensure a successful result. If a Rose of slow development is budded on a rampant briar, and all the strength of the latter is turned into the parasitical stranger, health cannot be maintained, nor will a freely vegetating Rose submit to be impeded in its progress by a sluggish stock. Thin away surplus branches from all stocks not budded as early as possible, not to wait a day even, but get the branches strong and healthy.

IN THE FORCING STOVE.

Where stove and greenhouse plants afford suitable cutting, propagation must now be pursued; as, generally speaking, it can be practised with the greatest success in the early rather than in the later part of the year. It should be remembered that the propagation of most plants is facilitated by the employment of bottom-heat and bell-glasses. Stove plants will derive great advantage from a partial shading during the glare of the day, and will be less liable to injury from drought. Many plants that will require shifting, such as *Justicias*, *Clerodendrons*, &c. Give plenty of water at the roots, syringe often in the evening, and keep the floors of the house and every part damp, to assist in maintaining a humid atmosphere. Bulbs of *Amaryllis*, &c. should be put together in a pit or frame, where they will be near the glass, and where the influence of the sun, with a gradual diminution of water, will mature them. Never permitting the foliage to flag is a good criterion as to the quantity of moisture plants require, keep as near that state as possible.

IN THE GREENHOUSE, &c.

As a free ingress of air must necessarily be permitted during fine weather, its rapid circulation, conjoined with active solar heat, must cause a rapid evaporation both from the plants and soil; hence there exists a necessity, under the above circumstances, of watering and syringing frequently. However beneficial a screen may be during bright hot sun, its presence is not required while the sun is obscured. Encourage the growth of *Azaleas* and *Camellias* by keeping them comparatively close (with shade during sunshine), and supplying them liberally with moisture administered by the syringe. Propagate *Roses* by cuttings from those plants which have been forced, and place the plants in a rather shady situation, in order that they may have a period of rest for a few weeks. *Calceolarias* that have ceased blooming should be re-potted; cut off dead tops, place the plants in a situation where they can be shaded from hot sun, admitting it morning and evening. Seed should be sown, so as to have the plants strong, to endure winter; such will bloom next season, and be much more vigorous than plants raised from cuttings. *Cinerarias* also that have done blooming should have the tops cut off, be fumigated in a close frame, as they are often affected with green fly; after which the plants should be turned out of the pots, and planted in a somewhat shady bed of good soil, in the garden. Sow seed now; the young plants will bloom early next spring. *Epacrises*, *Ericas*, &c., now done blooming, may be cut in, to render them bushy. The tubers of *Tropæolums* which have ceased blooming, and the tops withered, must be taken out of the soil, or be kept in a bag, &c., or the pot must be put aside, where it may have the soil kept dry till potting time. Greenhouse plants placed in the open air in pots should have frequent waterings at the under side of the foliage, to destroy or keep down green fly. Moss laid lightly between the pots keeps the roots somewhat cool, and tends to promote the health of the plants. Occasionally water the moss, if the weather be hot and dry.

BRIEF REMARKS.

OPENING OF ELVASTON GARDENS.—Whit-Monday was the day appointed for a public view of the unique and beautiful gardens at Elvaston Castle, near Derby, the seat of the Earl of Harrington. The noble Earl, with great condescension and liberality, granted to the friends of temperance at Derby the use of these gardens, under certain restrictions, for the benefit of the funds in course of collection for the erection of the Temperance Hall, now in progress in Curzon-street. An entrance charge of one shilling was demanded, and great preparations were made by the railway companies and others to convey visitors to the gardens at low fares. Unfortunately, the state of the weather was not quite favourable, yet a vast concourse of people were present from different parts of the country. The visitors were admitted through an avenue of trees, and along paths pointed out by guides and printed directions placed at every turn. After passing some distance through shady groves, they were conducted through a portion of the kitchen gardens, and by devious routes, until they arrived at the gardens of the Alhambra, the Mont Plaisir, and Fairstar. Here, wherever the eye turned, a most enchanting scene presented itself. Clipped yews, dressed into various forms, representing columns, pedestals, minarets, &c.—marble statuary of the most costly and antique kind—bowers, and green velvet nap—everything, in fact, that art and the appliances of wealth could accomplish in this particular range, is here to be viewed with feelings of wonder and astonishment. The garden of Mont Plaisir is immediately under the south front of the castle, from the front of which its general expression and singular design are seen to great advantage. It is enclosed on two sides (right and left) by yew hedges, in the form of walls, the sides being quite perpendicular, and the tops cut off as square as if they were pieces of masonry. The central portion is a covered walk, the direction of which is the outline of a square pincushion having rounded corners, and gently pressed on the four sides. This walk is eight feet wide, and the arch eight feet high. American arbor-vitæ is planted on each side of it, and now completely envelopes the walk, excluding the sun's rays, and rendering it a delightful retreat in hot sunny weather. Its exterior effect is striking, more especially when viewed from an elevated position, in conjunction with the other garden embellishments. At a little distance it presents the appearance of an even light green velvety nap, having various openings and loopholes, which are formed and arranged with architectural exactness. To persons on the walk, these loopholes, or representations of windows, present occasional opportunities of viewing the garden, which has a rich and singular appearance, from the extraordinary character and colouring of the subjects employed in its embellishment. The covered way only constitutes an outline to the centre, having other arrangements within it, the whole being surrounded at right angles with a raised terrace thirty feet wide. On the terrace next the castle there stands in the centre a sun-dial of singular workmanship, and on each side of this two Irish yews, in the form of half-circles, eight feet high. The back of these is towards the garden. In the concavities facing the castle are pedestals in gold, supporting richly carved figures in gold also. These contrast advantageously with the dark green of the yews. Eight covered seats, placed in regular positions, here represent the form of an old hall chair. The bases of these, as well as the covered walk, have variegated box, out of which spring the American arbor-vitæ, which are dressed in like manner. The raised terraces right and left are thus arranged—Irish yews and gold yews alternating. In front are gold yews and Irish junipers, similarly planted; they are all as nearly as possible ten feet high. The gold yews are trimmed into columns bearing crowns of the same. A second terrace rises above this on the north side, on the centre of which stands an enormous columnar yew, with a gigantic crown across. The gold yew has been grafted in various parts of the crown, and with good effect. This yew has a trimmed square base of thirty feet on the side, and three feet high; and again out of this rises a second circular base, eighteen inches above the former, out of which springs the column. Right and left of this noble plant are two pillar yews upwards of forty feet high, and then twelve similar yews of large dimensions; all these have been brought from a distance of upwards of thirty miles. Right and left, again, are *Araucaria imbricata*, at regular distances; on this raised terrace there are thirty specimens. The terraces are approached at right angles by stone steps facing the entrances, with covered walks, which lead to the interior parterre, and which may

be said to be formed of a combination of angular beds. In the centre stands a remarkable plant of *Araucaria imbricata*. Its manner of growth has the appearance of the Norfolk Island pine, the branches to the ground assuming the pendant frond-like habit of that plant, and it is no doubt a very distinct variety, for amongst the multitude of specimens of this *Araucaria* at Elvaston no other plant exhibits this peculiarity of growth. It has been planted fifteen years, during which period it has grown twenty inches and a half, on an average, annually, since it was planted. The *Araucaria* is often set down as a tree of extremely slow growth, but we have here a striking example to the contrary; and not only in this particular specimen, but in hundreds of others which are making equally rapid progress. In the divisions of this central department are other fine specimens of *Araucaria* and *Cryptomeria japonica*, the character of the whole being fully maintained by an arrangement of gold yews, Irish yews, and Irish junipers, planted so as to produce that same peculiarly striking effect which the exterior arrangement so amply discloses. In every part of these beautifully arranged grounds there are thousands of plants of great value, and the embellishments are of the most costly kind. Gigantic yews, low-cut yews, cedars of Lebanon, ambrosial bowers, statuary, beds of variegated flowering plants, forming when in bloom richly embroidered carpets, are tastefully arranged, and must be seen to be appreciated. Passing from the south-front entrance to the east, the visitor obtains a magnificent view down the great avenue, in the centre of which is a finely-kept lawn, each side of which is tastefully planted. From this point he traces his steps by the North-terrace Garden (which is suitably adorned), through labyrinths of yew hedges, Portugal laurel hedges, &c.; thence by the Magnolia Garden, with its sweetbriar hedges, and through a grove of cedars, when the lake and its wonderful auxiliaries suddenly burst on the view of the beholder—

“So wond'rous rare, the whole might seem
The scenery of a fairy dream.”

The lake, which is of considerable dimensions, abounds with large rocky decorations, clothed occasionally with lofty pines, and amongst the rugged decorations of the water are islands covered with rocks and planted with weeping hollies, junipers, &c. A high irregular mass stands out boldly in the foreground, covered with *Araucaria imbricata* to the summit, intermixed here and there with occasional groups of broom and other plants. From this point the view is very extensive, and the eye might well be content to rest upon it; but time presses, and turning a little to the left you enter the Fountain Garden, where various jets emit their playful streams of crystal, and a massive rockery in the back ground protects, as it were, a curiously executed shell grotto. Pursuing the course pointed out, through masses of rock and under covered yew hedges, you arrive at an arch, on looking through which the lake presents an extensive range, and new forms arise in the distance. At length you arrive at the narrow part of the lake, which is crossed by a bridge, the vista from which is extensive and varied, with no appearance of a close. In traversing the north side of the rock, bold promontories of various forms jet forward, and the whole is backed by an extensive plantation.

“Nor shall thy reverend yews, the sires who hold
Their sceptres verdant through the changeful year,
Unnoticed stand,”

For it is stated that in this plantation there are some yews six hundred years old. This lake, with its towering rocky projections and Alpine decorations, is entirely a work of art, and was, we believe, commenced in the year 1839. Many thousands of tons have been employed in the formation of the rock-work; and many of the large yews and cedars of Lebanon were transplanted and removed distances varying from four to forty miles. Instead of a few choice trees and plants scattered here and there, Elvaston Gardens are literally ornamented with acres of them. Since the death of the late earl, comparatively few labourers have been retained to keep the gardens in order; but, with here and there an exception, they still look very beautiful, and there is nothing of a similar kind in this country which at all approaches them.

THE GARDENERS' BENEVOLENT INSTITUTION.—The ninth anniversary of this valuable institution was held at the London Tavern on June 14th, Charles Dickens, Esq., chairman. In proposing the toast which expresses the assembled interest in

the institution in whose behalf they were met together, he observed,—“ I feel, in reference to this institution, something in the position of counsel for the plaintiff, with nobody on the other side. Although it had existed, instead of three times three, nine times nine years, I should still feel it my duty to trouble you with a few facts from the very short brief which has been entrusted to me; for that desperate gardener, Old Time, does so transplant and remove, as to warrant the supposition that there are always some to whom it may be desirable to state the merits of the case. The institution was founded in the year 1838, and for the first few years of its existence it seems not to have been particularly robust, and to have received rather more than its needful allowance of cold water; but in 1843 it was removed into a more genial situation, and grafted into a better *managerial* stock, and began to blossom and bear fruit; and now, under the shade of its friendly branches, thirty-five old people daily sit. It is to be observed of this institution, unlike some older and more renowned, that what it is in name it is in effect. The class for whose benefit it purports to be devised have its full and entire advantage. All the pensioners have been veritable gardeners or their widows; and, besides having upon its books this excellent rule, ‘ That gardeners who have contributed to the funds of the charity for fifteen years, and from old age or misfortune became destitute, have claims upon the institution in preference to those who have never subscribed to it,’ I observe that every subscriber is placed on the pension list by his own independent right. I lay great stress upon this, because I hold that the main principle of every society such as this should be is, in the first place, to help those who have helped themselves and helped others; and, secondly, to merge all considerations of its own importance in the sacred duty of relieving such persons, when they fall into affliction, with the utmost possible delicacy, and without the least chance of carrying a pang to their hearts, or bringing a blush to their honest cheeks (loud applause). That the society’s pensioners do not become such so long as they are reasonably able to toil is proved by the fact that the average age of the present pensioners is seventy-seven. That they are not wastefully relieved is shown by the fact that the whole sum expended for their relief does not exceed five hundred pounds per year. That no narrow confines of locality are favoured in the selection will be clear when I assure you that the pensioners are found in every part of the country, east, west, north, and south. That the expenses of management are not disproportionate to the society’s income is proved by their being all defrayed out of the annual subscriptions. The sum at present in hand is two thousand seven hundred pounds, and we mean to make it up to three thousand at least (applause). Such is the institution we now appeal to you to support; first to the employers and employed, and secondly to the members of the public of all degrees. That it has not addressed itself in vain to the employers is evident from its having for its president his Grace the Duke of Devonshire, whose whole possessions were remarkable for taste and beauty. And I notice with great pleasure on the list of its patrons the names of noblemen and gentlemen of great influence and station. I am particularly struck, in looking through the pages of this little book, with the number of nurserymen and seedsmen who have contributed, and the handsome sums written against their names. It is a very worthy example. The gardeners also muster very strong; and I do hope the day will come when not one will be left out, but every decent gardener in England will feel this society is a part of his calling, and though he may never want its aid, it is his duty to belong to it for the sake of others who may. The gardener particularly needs such a provision as this institution affords; his gains, if any, are not great, and I believe he often knows gold and silver better as colours of flowers than as coins; and it is easy to see how his exposure to the changes of the weather may render him particularly liable to sickness and infirmity. A gardener, of all men, should particularly appreciate the worth of such a society as this, for his continual observance of the changing seasons and the declining days may well suggest to him the decline of life, and that it is a dictate both of worldly prudence and Christian kindness thus to provide for it. Finally, to all here who are gardeners, and to all here who are not gardeners, except as we all trace our descent in a direct line from the first gardener Adam, this institution forcibly appeals. The universality of the results of the gardener’s calling is one of its greatest characteristics. If any improvement be made in Her Majesty’s garden, or in that of his Grace or my Lord, it is very soon transferred even to the costermonger. In the culture of flowers there can be no room for anything very selfish or very exclusive. The wind that blew

over the cottager's porch swept also over the grounds of the nobleman; and as the rain descended so universally, so it communicated to all gardeners, both rich and poor, an interchange of pleasure and enjoyment; and the gardener of the rich man, in developing and enhancing a fruitful flavour or a delightful scent, was in some sort the gardener of everybody else. It seems to me that a gentleman who spends large sums of money in developing a new flower or improving an old one is a public benefactor, and his gardener is in some sense *my* gardener, and everybody else's. Flowers are the best picture-books I know; and whenever I see them lying open at the labourer's door, I can always read in them that he is a better and happier man. It is not too much to say, the gardener is essential to all of us; he is associated with all countries and with all periods of time. Men who have agreed in nothing else have agreed to delight in gardening. The ancient people of the earth had gardens where now there are only ruins. The younger ancients had crowns of flowers. In China hundreds of acres are employed in gardens. When we travel by our railways we see the weaver striving for a scrap of garden, the poor man wrestling with smoke for a little bower of scarlet-runners, and they who have no spot of ground of their own will carry on their gardening in jugs and basins (cheers). We know how we find flowers in the factory and workshop, and even the prisoner in his lonely cell was found gardening after years and years of solitary confinement. Surely, then, the gardener, who produced shapes and objects so lovely and so comforting, should have some hold upon *the world's remembrance* when he himself became in need of comfort. Of the exponents of a language so universal as this, it is not too much to say that such men have a strong claim upon us when they need comfort; and, therefore, coming at last to three times three cheers for the three times three years, I give you 'Prosperity and Perpetuity to the Gardeners' Benevolent Institution.'

HORTICULTURAL SOCIETY'S EXHIBITION, HELD IN THE GARDENS AT CHISWICK, JUNE 12.—The quantity of the specimens shown was enormous, and their quality of very first-rate excellence. The display was brilliant in the extreme, and would have amply repaid for even a *walking journey*, from the most remote part of this kingdom, any lover of superb flowering plants, as well as fruits. We cannot enumerate all that was exhibited and obtained prizes, and therefore can only give particulars of one or two of the best collections or specimens in each *class*, by which our readers may judge of the merits of the plants mentioned.

In collections of 20 *Stove and Greenhouse Plants*, the 1st prize was awarded to Mr. May, gardener to Mrs. Lawrence, of Ealing Park, for as good a group of plants, perhaps, as ever was staged. At the back stood a *Polygala acuminata*, upwards of seven feet in diameter, and profusely covered with flowers; the graceful *Coleonema rubrum*, equally fine; *Azalea coronata*, magniflora, and *lateritia*, still "mountains of flower;" the blue *Leschenaultia*, more than three feet through, and a mass of blossoms; *Stephanotis floribunda*, fresh, sweet, and beautiful; a very fine specimen of the red variety of *Erica tricolor*, and the Cavendish and other Heaths, together with the handsome pink-blossomed *Adenandra fragrans*, one of the better kinds of *Everlasting*, the ever-flowering red *Leschenaultia*, *Ixora crocata*, the clear yellow *Gompholobium splendens*, in the shape of a little bush, which looks much better than when it is trained stiffly on a trellis; *Boronia serrulata*, the Showy *Rondeletia*, the brilliant *Epacris miniata*, *Pimelea mirabilis*, in the way of, but rather handsomer than, *decussata*; and a noble *Clerodendron Kämpferi*. The 2nd prize was awarded to Mr. Cole, gardener to H. Colyer, Esq., of Dartford, for a fine exhibition, which comprised a huge *Allamanda Schottii*, *Dipladenia splendens*, unusually well flowered; the charming *D. crassinoda*; the pale yellow-blossomed *Allamanda grandiflora*; *Clerodendron paniculatum*, bearing enormous panicles of gaudy flowers; the White *Ixora*, hardly sufficiently advanced in bloom; the *Gledstane* *Azalea*, a well-flowered *Phænocoma proliferum*; *Leschenaultia formosa*, a depressed pyramid of red blossoms; the sweet *Stephanotis floribunda*; an *Everlasting*; *Pimelea Hendersoni*, richly ornamented with rosy blossoms; *Erica Cavendishii*, and two varieties of *E. tricolor*; the Hoya-like *Cyrtoceras reflexum*; *Polygala acuminata* and *cordifolia*; the rosy-eyed white-flowered *Vinca*; *Pimelea mirabilis*; an immense *Pimelea decussata*; and an example of *Azalea lateritia*, *Gledstanesii*, and *variegata*, all "worked" together on one stock. A third group was contributed by Mr. Taylor, gardener to J. Coster, Esq., of Streatham. It consisted of a good *Stephanotis floribunda*; the favourite white-flowered *Gardenia*

florida; a finely-blossomed *Chironia glutinosa*; *Erica Cavendishii*, a complete mass of yellow blossoms; the ever-flowering *E. mutabilis*; the red *Leschenault*; *Boronia serrulata* and *pinnata*; the scarlet *Ixora*; the bright yellow *Allamanda cathartica*; *Polygala cordifolia*; and one or two other plants. In Messrs. Fraser's collection, which was fourth, we remarked *Epacris miniata* and *grandiflora*; a fine *Pimelea Hendersoni*; *Clerodendron Kämpferi*, with two spikes of scarlet flowers; the much-esteemed *Stephanotis floribunda*; a neat bush of *Chorozeuma varium nanum*; *Erica Wilsoni*, the best of all the varieties of *tricolor*; the *Diosma*-leaved *Pimelea*; *Polygala acuminata*; one of the best of the *Everlastings*; the red *Leschenaultia*; the white-blossomed sweet-scented *Sphenotoma gracilis*; *Ixora coccinea*; *Allamanda cathartica*; the *Azalea Gledstanesii* and *lateritia*, united in one plant; *Pimelea mirabilis*; *Aphelexis humilis*; and the *Cavendish Heath*.

In collections of 15 *Stove and Greenhouse Plants* the 1st prize was awarded to Mr. Green, gardener to Sir E. Antrobus, Bart., of Cheam, whose group consisted of the *Azalea variegata*, almost as gay as in the month of May; a nice *Polygala acuminata*; *Stephanotis floribunda*, loaded with snowy blossoms; an excellent specimen of *Rondeletia speciosa*; a luxuriant *Allamanda cathartica*, scarcely at its best as regards bloom; *Azalea vivicans* and *præstantissima*, both pyramids of brilliant flowers; *Leschenaultia formosa* and *Baxteri*; the *Wilson* variety of *Erica tricolor*; the scarlet and saffron *Ixoras*, both insufficiently advanced in bloom; *Polygala Dalmaisiana*; an *Everlasting*; and *Erica depressa*. Mr. Carson, gardener to W. F. G. Farmer, Esq., of Cheam, sent the next best group, the crown-head of which was decidedly *Gardenia Fortuni*, a fine plant covered with large double white sweet-scented flowers; then came *Allamanda grandiflora* and *cathartica*, both handsomely furnished with yellow blossoms; a large *Epacris miniata*; the charming rosy-flowered *Dipladenia crassinoda*; the red *Leschenault*; *Azalea Gledstanesii* and *variegata*; the scarlet *Ixora*; *Polygala oppositifolia*; the purple variety of *Aphelexis macrantha*; *Crowea saligna*; and small plants of *Polygala Dalmaisiana*, *Leschenaultia Baxteri*, and *Coleonema rubrum*. Mr. Dods, gardener to Sir J. Cathcart, Bart., sent a huge *Epacris miniata*; *Allamanda cathartica*; *Azalea Danielsiana*, a perfect mass of brilliant flowers; the small yellow-blossomed *Dillwynia floribunda*; *Pimelea hispida* (a neat kind), and *P. Hendersoni*; *Tetratheca verticillata*; an *Everlasting*; the scarlet *Ixora*; a pale variety of *Erica tricolor*; *Clerodendron fallax*; and a neat *Leschenaultia formosa*.

Helichrysums.—Collections were shown by Messrs. Veitch (1), Green (2), Stuart (3), and Taylor (4). In these we remarked *Aphelexis macrantha purpurea* and *macrantha rosea*, speciosissima, *purpurea grandiflora*, *humilis* and *humilis rubra*, *spectabilis grandiflora*, *sesamoides* and its large variety, and *rupestris*.

Orchids.—These were plentiful and exceedingly fine, though perhaps they scarcely had the freshness and delicate beauty about them which they possessed in May. In the group of 20 plants from Mr. Blake, gardener to J. H. Schröder, Esq., to which the 1st prize was awarded, we remarked *Galeandra Baueri*; a large plant of *Aerides odoratum*, hardly sufficiently advanced in bloom; the pretty *A. Larpentæ*, and other species of that lovely genus; the white *Dendrobium Heyneanum*; *Lælia cinnabarina*; *Saccolabium præmorsum* and *guttatum*; the Bearded Lady's Slipper (*Cypripedium barbatum*); a very fine white Butterfly Plant (*Phalænopsis grandiflora*); one of the many varieties of *Cattleya Mossiæ*; a fine plant of *Vanda tricolor*; the slender-leaved *Maxillaria*; *Lacæna bicolor*, well flowered; *Calanthe veratrifolia*, in admirable condition; the *Wray Brassia*, *Lycaste aromatica*, and *Vanda teres*. Mr. Franklin, gardener to Mrs. Lawrence, sent the next best collection, in which were *Sobralia macrantha*, bearing some fifteen or sixteen glorious purple blossoms; *Aerides purpurascens* and *odoratum*; the broad-leaved *Epidendrum*; *Oncidium flexuosum*; *Lacæna bicolor*, with six flower-spikes; *Vanda tricolor*, insignis, and *Batemanni*, the latter with a strong spike of beautiful blossoms; *Saccolabium Blumei* and *S. guttatum*; *Trichopilia tortilis*; the brown-spotted, green-flowered *Brassia Wrayæ*; *Oncidium Papilio*, bearing five glorious flowers; the *Dalhousei Dendrobe*; a good *Cattleya Mossiæ*; *Epidendrum alatum*, with two fine flower-spikes; the useful *Oncidium pulvinatum*, and *Odontoglossum hastilabium*. Mr. Williams, gardener to C. B. Warner, Esq., had a large *Aerides odoratum*, in good condition; *A. crispum*, with four fine flower-spikes; *A. purpurascens*, insufficiently in bloom; the charming *A. maculosum*; the large Butterfly

Plant; *Oncidium flexuosum*; a small *Dendrobium Wallichii*; a beautiful *Saccolabium guttatum*, bearing ten flower-spikes, some of which were nearly eighteen inches in length; *Cattleya Loddigesii*, fresh and fine; a nice plant of *C. Mossiæ*; *Calanthe veratrifolia*; the favourite *Epidendrum cinnabarium*; *Oncidium ampliatum* major, rather past its best; the Bearded Lady's Slipper; *Vanda tricolor* and *V. suavis*; the large white-lipped *Zygopetalum rostratum*, and the as yet somewhat scarce *Trichopilia coccinea*.

Azaleas were again produced by Mr. Green and Mrs. Lawrence, but this time their brilliancy was much impaired. The sorts consisted of *magniflora*, *decora*, *lateritia*, *Gledstanesii*, *variegata*, *Rawsoni*, *optima*, *rosea punctata*, and *exquisita alba*. Mr. Fleming, gardener to the Duke of Sutherland, at Trentham, sent small plants of some of the newer kinds, among which were *Amaranthina*, a good sort, with large rosy blossoms; *Comosa*, *Grandis*, *Iveryana*, *Decora*, and *Beauty of Reigate*. Messrs. Lane had a collection of small plants, in which two and three sorts were "worked" together on one stock.

Messrs. Veitch received a Silver Banksian Medal for *Rhododendron album grandiflorum*, a hardy-looking kind, the produce of a cross between *R. catawbiense* and *maximum album*. The flowers are of good shape, and white, marked in the upper petal with a straw-coloured stain.

Tall *Cacti* in flower were furnished in good condition by Mr. Green, who produced the large-flowered variety of the white *Epiphyllum crenatum*; *E. Ackermannii*; *E. speciosum*, and its much handsomer variety *elegans*; *E. grandiflorum*, and *Cereus speciosissimus*.

Roses in pots were, as usual, much admired, and fine for June. The gems of Messrs. Lane's group, which was first, were Paul Ricant, certainly one of the very finest *Roses* we possess, being both excellent in shape and brilliant in colour; Great Western, *Magna rosea*, a large blush, but rather loose; Paul Perras, Emperor Probus, Duchess of Sutherland, and Queen. Messrs. Paul produced Barbot, buff, with a salmon centre; Goubalt, the favourite *Souvenir de la Malmaison*, Mrs. Bosanquet, Paul Perras, and Madame Plantier, the latter hardly sufficiently in bloom. Mr. Francis had a fine plant of *Brennus*, a tall *Coupe d'Hébé*, Pauline Plantier, with small pale yellow flowers, and *Warricus*. In the Amateurs' Class, the 1st prize was awarded to Mr. Terry, gardener to Lady Puller, of Youngsbury, for admirably-managed plants, among which were *Sophie de Marcilly*, blush, with a pink centre, neat and beautiful; *Elise Sauvage*, *Las Casas*, a very fine example of *Souvenir de la Malmaison*, which is deservedly the most esteemed of *Roses*; Duchess of Sutherland, Paul Perras, fresh and fine, *La Ville de Bruxelles*, *Armosa*, and *Lamarque*. Among Mr. Rowland's plants that which elicited most attention was Paul Ricant, which is a grand acquisition to the class of Hybrid Bourbons. The same gentleman had also good examples of *Coupe d'Hébé*, Emperor Probus, Queen, Paul Perras, *Ne plus ultra*, *Chénédoché*, and *Louis Bonaparte*. From Mr. Roser, gardener to J. Bradbury, Esq., came our old friends *Baronne Prevost* and *La Reine*.

Cape Heaths were plentiful, well cultivated, and beautifully flowered. Among Nurserymen, Mr. Epps, of Maidstone, had the best plants; but they were disqualified on account of two of the sorts being so much alike as to be hardly distinguishable one from the other, the schedule requiring *entirely distinct* varieties. The plants in question consisted of *tricolor Wilsoni* and a seedling from it. The 1st prize was therefore given to Messrs. Rollisson, the 2nd to Messrs. Fairbairn, the 3rd to Messrs. Frazer, and the 4th to Mr. Pawley. In the Amateurs' Class, Mr. Smith, gardener to W. Quilter, Esq., was 1st; Mr. May, gardener to Mrs. Lawrence, 2nd; Mr. Cole, 3rd; and Mr. Laybank, 4th. For plants in 11-inch pots, Mr. Epps was 1st, Mr. Clarke 2nd, and Mr. Pamplin 3rd; and among Amateurs, Mr. Roser was 1st, Mr. Watson 2nd, Mr. Jarvis 3rd, and Mr. Stanley 4th. Three groups in 8-inch pots were furnished by Messrs. Taylor, Speed, and Hamp. In the different collections we remarked the following varieties:—*Ventricosa grandiflora* (a very fine sort), *V. breviflora*, *V. tumida*, *V. superba*, *V. prægnans*, *Inflata*, *I. rubra*, *Vestita coccinea*, *Cavendishii*, *Bergiana*, *Depressa*, *Tricolor*, *T. Leeana*, *T. elegans*, *T. Wilsoni*, *T. rubra*, *Halicacaba*, *Massoni*, *Vernoni*, *Mutabilis*, *Gemmifera*, *Elegans*, *Perspicua*, *Beaumontia*, *Metuleflora*, *Eximea*, *Alberti* (buff), *Batemanni*, *Jasminoides*, *Thunbergia*, *Jubata*, *Florida*, *Dilecta*, *Obbata*, *Tortiliflora*, *Westphalingia*, *Maidstonensis*, *Savilleana*, and *Odora roseæ*.

Single Specimens.—The best of these were *Erica Massoni*, from Mr. Bruce, gardener to B. Miller, Esq., of Merton; a good example of the charming *Hoya bella*, from Mr. Over; *Erica Cavendishii*, from Mr. May, gardener to Mrs. Lawrence; a large *E. Bergiana*, from Mr. Smith, gardener to W. Quilter, Esq., of Norwood; *Leschenaultia formosa*, from Mr. Cole; and *Mitraria coccinea*, from Messrs. Veitch.

New Plants.—Messrs. Backhouse, of York, sent the beautiful *Lælia purpurata*, *Cleisostoma* (?) *crassifolium*, and the Californian *Diplacus*; Messrs. Veitch had *Streptocarpus biflorus*; Messrs. Standish and Noble the orange-scarlet Chinese *Lilium sinicum*; and Mr. Over the variety of *Hoya bella* called *Paxtoni*; Mr. Woolley had *Dendrobium clavatum*; and Messrs. Rollisson a variety of *Oncidium Papilo* called *pulchellum*.

Foremost among *New or Rare Plants* not in flower were the evergreen pinnated Chinese Berberries (*trifurca* and *Bealii*), furnished by Messrs. Standish and Noble; these were the admiration of everybody. Then came the beautiful variegated-leaved *Cissus discolor*, from Messrs. Rollisson; two magnificent leaves of the Royal Water Lily, from Mr. Ivison, gardener to the Duke of Northumberland at Sion; and *Fitz-Roya patagonica* and *Saxe-Gothæa conspicua*, from Messrs. Veitch, of Exeter.

Lycopods were contributed by Messrs. Woolley and Stuart. Among these were *L. stoloniferum*, *cæsum arboreum*, *apodum*, *Louisianum*, *cordatum*, *cuspidatum*, and *denticulatum*.

Hothouse Ferns.—Of this most interesting tribe the following were shown, intermixed with Orchids, by Messrs. Woolley and Williams; viz., *Adiantum forianum*, *formosum*, *cuneatum*, *concinnum* (fine), *trapeziforme*, and *macrophyllum*; *Gymnogramma sulphurea* (fine), *Goniopteris vivipara*, *Darea cicutaria* (fine), and *Blechnum brasiliense*.

In *Pelargoniums*, 12 varieties, the 1st prize was withheld. The 2nd prize was awarded to Mr. E. Lawrence, for *Gulielma*, *Alonzo*, *Constance*, *Ajax*, *Marianne*, *Conspicuum*, *Governor*, *Ocellatum*, *Star*, *Prince of Orange*, and *Rosamond*. Dealers: 1, Mr. J. Dobson, of Woodlands Nursery, Isleworth, whose plants were finely flowered, and "to the day." They consisted of *Gertrude*, *Magnificent*, *Painter improved*, *Mont Blanc*, *Jupiter*, *Ambassador*, *Purpureum*, *Silk-mercer*, *Diadem*, *Delicatissimum*, *Vanguard*, and *Star*; 2, Mr. Turner, of the Royal Nursery, Slough, with plants, scarcely at their best, of *Constance*, *Rubens*, *Rowena*, *Alonzo*, *Ganymede*, *Magnificent*, *Rosamond*, *Gulielma*, *Ajax*, *Narcissus*, *Beatrice*, *Enchantress*; 3, Mr. Westwood, of Acton-lane; 4, Mr. Bragg, of Slough. Six *Pelargoniums*, in 11-inch pots: 1, Mr. Parker, of Teddington, four of whose plants were marvels of good cultivation. The sorts were—*Thisbe*, *Bertha*, *Rosamond*, *Gulielma*, *Centurion*, and *Star*. Dealers: 1, Mr. Westwood, with *Bianca*, *Star*, *Cuyp*, *Sarah*, *Rosamond*, and *Painter*; 2, Mr. Turner, with *Constance*, *Pride of the Isles*, *Narcissus*, *Rowena*, *Alonzo*, and *Norah*. Six *Fancies*: 1, Mr. Robinson, of Thames Bank, with *Queen Superb*, *Madame Miellez*, *Fairy Queen*, *Princess Maria Galitzin*, *Perfection*, and *Richard Cobden*; 2, Mr. Roser, with *Statiaski*, *Hero of Surrey*, *Picturatum*, *Prospero*, *Magnificum*, *Jenny Lind*. Dealers: 1, Mr. Turner, with *Princess Maria Galitzin*, *Defiance*, *Miss Sheppard*, *Anais*, *Exquisite*, and *Triumphant*; 2, Mr. Westwood, with *Orlando*, *Mrs. S. Lefevre*, *Reine des Françaises*, *Nourmajed*, *Mrs. Bailey*, *Purity*; 3, Mr. Ayres, of Blackheath, with *Celestial*, *Queen Superb*, *Itolinski*, *Picturatum*, *Conspicuum*, *Alboni*; 4, Mr. Gaines. The Five Guinea Cup for the new varieties of *Fancy Pelargoniums* sent out in autumn 1851, by Mr. W. P. Ayres, of Blackheath, was awarded to Mr. Robinson, and reflected credit both on the grower and the raiser; the sorts were *Conspicuum*, *Caliban*, *Mirandum*, *Gipsy Queen*, *Advancer*, and *Formosissimum*. Of Seedling *Pelargoniums*, we noticed *Beck's Empress*, and *Turner's Queen of May*, a conspicuous and striking variety; *Pasha* (Dobson) is distinct, and in many respects good; *Optimum* (Foster) was in capital condition, although the plant was by no means well grown. An interesting hybrid *Pelargonium* from Mr. E. G. Henderson received a Certificate; the tricolor-leaved sort from Mr. Kinghorn was, as it is named, "Attractive" for decorative purposes, but it could not be termed one of an entirely new cross. While on the subject of Seedlings, we may mention that *Fuchsia Perfection* (Banks) will be the best dark variety "out;" corolla deep purple, sepals and tube coral-red, smooth, the sepals reflexed sufficiently, and remarkable for their breadth.

Ranunculuses.—A collection of 50 superb varieties was furnished by Mr. Tyso, of Wallingford, among which were fine blooms of the following Seedlings of his own raising, viz., *Flaminius*, *Minos*, *Exhibitor*, *Amasis*, *Dædalion*, *Cathcart*, *Dilectus*, *Dido*, and a new yellow called *California*; also *Lightbody's Herald*, *Thompson's Seedling*, *Giles' Eliza*, *Gomer*, *Lentulus*, *Costar's Apollo*, and *Charlotte*.

Calceolarias were brought out better than hitherto; but, to maintain their position, more, much more, must be accomplished. The 1st prize was awarded to Mr. Constantine; 2nd, to Mr. Franklin; and, 3rd, to Mr. Roser. Dealers: 1st, to Mr. Gaines, for *Crænta*, *Baron Eden*, *Endymion*, *Confidence*, *Christine*, and *Horatio*.

EXHIBITION HELD IN THE ROYAL BOTANIC SOCIETY'S GARDEN ON JUNE 9.—The following new or rare plants were shown by Messrs. Henderson, of Pineapple-place:—*Gompholobium Bdwillii*, a species of good bushy habit, having large yellow pea-blossom flowers; and *Gastrolobium calycynum*, a desirable species, with brownish-yellow flowers, and of a robust habit; also *Balsamia latifolia alba*, a good stove species of neat habit, with pure white flowers; *Stylidium mucronatum*, an interesting species, with rosy-pink flowers; and *Vriezia psittacina*, a desirable species, with vermilion and yellow bracts. Messrs. Rolisson and Sons, of Tooting, had *Panax excelsa*, a handsome evergreen shrub, with large pinnate foliage, and flowers produced in dense racemes, but these are more beautiful in the bud than when fully expanded, being of a rich vermilion colour; also *Munronia javanica*, apparently suited for stove culture, and having pinnate leaves and white tubular flowers. A species of *Linaria*, from Portugal, was sent by Mr. Stark, of Edinburgh; the flowers are of a dark purplish colour, and it is likely to prove a desirable species for the rock-work or border; also *Barbarea vulgaris*, fol. variegatis. *Jonesia asoca*, a stove shrub, with pinnate leaves and tubular orange and scarlet flowers, the filaments much exerted, apparently belonging to the order *Sapindaceæ*, from Messrs. Henderson. *Schizanthus retusus alba*, from Mr. Cole. Messrs. Henderson, of the Wellington-road Nursery, sent a species of *Piperomia*, having broad fleshy leaves, and apparently of good habit; with this was *Conradia verrucosa*. Mr. Speed, of Edmonton, showed a good plant of *Franciscea eximia*, a fine free-growing stove species. Mr. Cole had a species of *Ixora* of good habit, having large leaves and compact heads of salmon-coloured flowers.

Single Specimens.—The best was *HOYA BELLA*, an admirably-grown plant, about three feet through; this was shown by Mr. Over, gardener to H. McMullen, Esq., Clapham.

Heaths.—No fewer than nine collections of 12 plants were contributed, four in the amateurs' class and five in the other. In the first were Mr. Smith, gardener to W. Quilter, Esq., Norwood, 1st; Mr. May, Ealing, 2nd; Mr. Cole, 3rd; and Mr. Roser, gardener to J. Bradbury, Esq., Streatham, 4th. Mr. Smith's plants were all large, and in fine flowering order; the best were *Perspicua nana*, *ventricosa*, *retorta major*, *mutabilis*, and *Cavendishii*. Mr. May had a beautifully grown *Cavendishii*, about four feet through, the curious *Halicacaba*, *Tricolor Lecana*, *Vestita coccinea*, and *V. breviflora*. The principal in Mr. Cole's group were *Tricolor Wilsonii*, three feet in diameter, *Masonii*, *Elegans*, *Mutabilis*, *Depressa*, and *Cavendishii*. In the open class, Mr. Smith's plants were in admirable condition, comprising *Cavendishii*, about four feet in diameter; *Bergiana*, equally large and handsome; *Metulaeflora*, exquisitely grown; and *Tricolor elegans*. Messrs. Rolisson had a pretty *Masonii major*, also *Tricolor Wilsonii florida*, *Pægnans superba*, *Jubata*, and *Ventricosa grandiflora*, all superb examples of this tribe. Mr. Pawley had a beautiful *Cavendishii*, four feet through; a well-grown *Masonii*, two feet through; and *Tricolor Wilsonii*. Messrs. Fraser's *Cavendishii* was finely grown, being fully four feet through, and well flowered; with this may be mentioned *Tricolor* and *Tricolor elegans* as good plants.

HOLLYHOCK.—Begin now, and take the suckers or young plants that have grown round the old one carefully away. Plant each in a small pot, using sandy-loam, mixed with some peat. Sprinkle them gently, and place them in a frame where they can get a genial bottom heat; and here they may remain till rooted. When roots are visible, give them a liberal shift, put them in a cold frame, give plenty of air, and in a short time afterwards plant them in the open ground. In this manner they may be continued as long as you can get cuttings.—*Senex*.

THE VEGETATION OF CHAGRES RIVER.—And here I must stop a moment to tell, as well as I can, of that most wonderful and surprising scenery. It was so gorgeous, so overloaded and smothered with beauty in a thousand different forms, that I feel confident that if Dr. Johnson had compiled and composed a dictionary of a hundred volumes, all filled with words meant to represent the sublime and the beautiful, he could never have supplied us with a sufficiency of words, or terms expressive enough, to describe such a bewildering magnificence. Each tree of that dense forest, besides the beauty and richness of its own colossal blossoms, was decked out, covered, and seemingly almost smothered with a wilderness of creepers, climbers, and parasites, each with a separate beauty of its own, and bearing a blossom more perfect than the most priceless hothouse exotic ever seen in England. Here before us is an example which I will take for a faint illustration. It is a gigantic zapoté-tree, nearly two hundred feet high; it is in full blossom. The flower is something like an enormous mass of floating scarlet satin, embroidered in gold and silver; from its gem-like centre floats a long streamer of feathery jewels (if one may use the expression), which, in the case of this flower close to us, drops partly into the transparent water, and is almost hidden, colossal as it is, by an equally colossal butterfly, of the deepest and most sky-like of all blues. We saw vast numbers of these lovely creatures on our journey. Close to the zapoté-tree is a majestic palm, growing together with a stately bamboo, rising in massive feathers to an immense height. Underneath luxuriate a hundred fan-palms, which much resemble their appropriately-given names. Over all this group of strange and lovely trees, a million of parasites twist and curl, joining one with the other, as with the careful skill and systematic arrangements of an embroiderer on gold. These festoonings and joinings together, and woven labyrinths of flowers, sometimes took the most enchanting and deceptive forms, resembling turreted castles, with oriel windows, crossed, and interlaced, and counterlaced in such thick clusters, that they looked in the distance like the richest stained glass. Remember, I have only taken an isolated case, a comparatively separate group, which I observed more particularly from its occurring in a clearing round an Indian hut, in a rank jungle, but at some distance from the real forest of high trees. Farther on, in this same clearing, was a formation of parasites which wonderfully resembled the ruins of an old castle or palace. The remnants of two little turrets, of exquisite architecture (as it seemed), might be observed over the half-fallen remains of an arch, so rounded, and peaked, and twisted, and wound with creepers, that it seemed as though the plants themselves, or the air, were their support; they had, no doubt, grown up round the decaying stump of a tree left standing when the other trees in the clearing were cut down. In some places, one group of trees would seem actually to be growing upon those below them: and above them, again, flourished and towered those same extraordinary plants I saw in Mexico (and of which I gave an illustration), only on a very magnified scale. Over some trees that we passed immense White Rose-trees (the Roses the size of Dahlias), climbing up to the very topmost bough and twig, poured down in a tangled torrent an enormous mantle of Roses and leaves, several feet thick, down into the swift river, hanging and floating on the water, which was scented and perfumed with the million of flowers thus borne on its surface. Through all this thick matting and leafy veil struggled the smothered blossoms of the half-murdered tree. Perfect clouds of brilliant birds and butterflies hovered over our heads, sometimes darting down to skim over the water, studding it as with a shower of mammoth gems, or alighting in flocks on the trees, to peck at the fruit with which hundreds of those marvellous trees were bent and laden. Several times they looked so tempting that we asked the boatmen to stop and let us get some; but they said we had much better not eat any fruit while the sun was so hot, in this unwholesome climate, and that they would get us as much as we chose at the next place we should stop at, for nothing. So we amused ourselves with doubly feasting our eyes on the incomparable beauties of that forest of fairyland, instead of feasting our palates upon its delicious productions.—*A Young Traveller's Journal of a Tour in North and South America.*

ANAGALLIS, WINTERING, &c.—It is no uncommon thing to hear of some of our best flower-gardeners inquiring of their friends if they have any cuttings of the blue *Anagallis* to spare; saying that by some means or other they had not been successful in striking it the previous autumn. Such a complaint we have often heard at the usual spring season for propagating such things. Now, there is no plant

which increases with more readiness in the spring than this *Anagallis*, provided there are any plants to propagate from; which, however, is very unlikely, if care has not been taken the previous summer to provide a supply early in the season. It is rare that this plant will strike root and live through the winter in the ordinary way. Other things strike and live, if cuttings of it be delayed later than July; but it is better to be earlier than that. In fact, I usually preserve a few of the spring plants left at turning-out time, which I allow to stand in a great measure pot-bound all summer; occasional stopping, and perhaps one shift, are all they get, and towards autumn a few short twiggy sticks are thrust into the pot, to act as a sort of protection to the long, crooked, unyieldly top it usually gets, and which any careless handling is sure to break off at the neck. It is true they are not ornamental by such treatment, but whoever did see *Petunia* or *Anagallis* in any other than an unsightly condition at that period? It is sufficient if by such means we are able to carry them through the winter; their progeny makes ample compensation for their untidy appearance. Now, in parterre gardening, a bed of blue *Anagallis* is generally deemed indispensable, there being nothing like it as regards colour, habit, and general adaptation to circumstances, and therefore cuttings of it in spring are really so invaluable that the possessor of such a stock is sure of the visits of some of his friends, who, with a pitiful tale, narrate their loss of this favourite. I would therefore impress on all such to save a plant or two at bedding-out time, and to take care during summer that they are not neglected; or, if their stock be exhausted, in filling up their beds. A few cuttings may be put in about June, which strike and grow pretty well at that time; but do not by any means delay the process later, unless you are better provided than usual with the means of striking and keeping this plant. I need hardly add that, when matured, it lives the winter quite as well as *Verbenas*, will endure more damp than *Scarlet Geraniums*, but not so much as *Calceolarias*, *Penstemons*, and *Gaillardias*.—*Florista*.

THE SIGNS OF FAIR WEATHER.—When the sun is fair and bright at its rising in the morning, and is blushing without spots or black clouds near him when he sets at night, it is a sign of fair weather. When the moon is three or four days old, and has her horns sharp and pointed very bright, it is a sign of fair weather till she comes to the full, if not the whole month. If the moon has a bright shining circle about her when she is at the full, it promises fair weather for many days. When the stars shine clear and bright, and seem to dart out pointed rays, it is a sign of fair weather. Also, when clouds sink low, as into valleys at south-east or south-west, it is a sign of fair weather. If the tops of hills be clear, it is a sign of fair weather. If there are to the north-west white scattering clouds, like fleeces of wool, it is a sign of fair weather. When white clouds or mists hang just over rivers, and disperse no further, it is a sign of fair weather. When a rainbow appears after a shower, and the blue-yellow part of it be very bright, and the highest colours, they are tokens of fair weather. When bees fly far from their hives, and come home late, it is a sign of fair weather. When there are great swarms of gnats, it presages fair weather. Glow-worms shining by night is a sign of fair weather. When larks rise very high, and continue singing a long time, it is a sign of fair weather. When kites fly aloft, it bespeaks fair dry weather: Lord Bacon gives this reason for it, because the kite mounts most into the air of that temper wherein he delights; for this aspiring bird does not so much affect the grossness of the air as the cold and freshness of it, for being a bird of prey, and therefore hot, he delights in the fresh air. When lapwings or plovers fly high and then low, and make continual cries, it bespeaks warm weather. When swallows fly high, it is a sign of fair weather. When owls hoot much, it is a sign of fair weather; and though owls do always hoot much both in wet and dry weather, yet there is this difference, that their hooting is more clamorous in wet weather, but more easy and sedate in fair weather.

ANTS.—Having been much troubled with ants in my plant-houses, I have tried nearly everything recommended in your pages, but without success. Spirits of juniper and turpentine only drive them away while the scent remains, but I find a mixture of levigated mercury and treacle will destroy them; I put the treacle on small plates, with a very small portion of the mercury, which soon attracts them.—*Gardeners' Chronicle*.

Day of California

TO THE
ALBANY



1. *Jasminum nudiflorum*. 2. *Swainsona Osbornii*.



"THE tiny heath-flowers now begin to blow ;
The russet moor assumes a richer glow ;
The powdery bells, that glance in purple bloom,
Fling from their scented cups a sweet perfume ;
While from their cells, still moist with morning dew,
The wandering wild bee sips the honied glue :
In wider circle wakes the liquid hum,
And far remote the mingled murmurs come."

"In this delightful garden,
This paradise of flowers,
The gay delight of man,
The treasure of the earth,
The wonder of the world, the work of God,
By the soft music of the rills and birds
Let us sit down in joy."

"Observe the rising Lily's snowy grace,
Observe the various vegetable race ;
They neither toil nor spin, but ceaseless grow,
Yet see how warm they blush ! how bright they glow !
What regal vestments can with them compare !
What king so shining, or what queen so fair !"

1. JASMINUM NUDIFLORUM.

THE elegant *Jessamine* is an universal favourite. The name is derived from the Greek, and signifies "an agreeable odour."

Jessamine is one of the shrubs of which Milton forms the bower of Adam and Eve in Paradise :

"Thus talking hand in hand alone they pass'd
On to their blissful bower : it was a place

Chosen by the sov'reign Planter, when he framed
 All things to man's delightful use ; the roof
 Of thickest covert was interwoven shade,
 Laurel and Myrtle, and what higher grew
 Of firm and fragrant leaf: on either side
 Acanthus, and each odorous bushy shrub,
 Fenced up the verdant wall, each beauteous flower,
 Iris all hues, Roses and Jessamine,
 Rear'd high their flourish'd heads between, and wrought
 Mosaic ; underfoot the Violet,
 Crocus and Hyacinth, with rich inlay
 Broider'd the ground, more coloured than with stone
 Of costliest emblem."

The poet Cowper speaks of the common white in the following passage :—

"The *Jasmine* throwing wide her elegant sweets,
 The deep dark green of whose unrivall'd leaf
 Makes more conspicuous, and illumines more,
 The bright profusion of her scatter'd stars."

"Who that hath reason and his smell,
 Would not 'mong Roses and Jasmine dwell !"

"Come gentle air ! and while the thickets bloom,
 Convey the *Jasmin's* breath divine,
 Convey the woodbine's rich perfume,
 Nor spare the sweet-leaved eglantine."

"The Jessamine, with which the queen of flowers,
 To charm her lord, adorns his favourite bowers ;
 Which brides by the plain hand of Neatness drest,
 Unenvied rival ! wear upon their breast ;
 Sweet as the incense of the morn."

The Jessamine is more fragrant by night than by day :

"'Twas midnight—through the lattice, wreathed
 With woodbine, many a perfume breathed
 From plants that wake when others sleep ;
 From timid *Jasmine* buds—that keep
 Their odour to themselves all day,
 But, when the sun-light dies away,
 Let the delicious secret out
 To every breeze that roams about."

There is an elegant gallantry in the following lines, from the Spanish of Don Luis de Gongora :—

"From my summer alcove, which the stars this morn
 With lucid pearls o'erspread,
 I have gathered these *Jessamines* thus to adorn
 With a wreath thy graceful head.
 From thy bosom and mouth they, as flowers, ere death,
 Ask a purer white, and a sweeter breath."

Their blossoms, a host of bees, alarmed,
 Watch'd o'er on jealous wing;
 Hoarse trumpeters seemed they all, and armed,
 Each bee with a diamond sting:
 I tore them away, but each flower I tore
 Has cost me a wound which smarteth sore.

 Now, as I these *Jessamine* flowers entwine,
 A gift for thy fragrant hair,
 I must have from those honey-sweet lips of thine
 A kiss for each sting I bear:
 It is just that the blooms I bring thee home
 Be repaid by sweets from the most lovely one."

The Hindoos, who use fragrant flowers in their sacrifices, particularly value the *Jessamine* for this purpose.

Jessamine abounds in the gardens of the Italians. In the East it is cultivated for the stems too, of which *pipes* are made. Dallaway says, speaking of the Turks:—"In his pipe an opulent man is extremely sumptuous; the head must be of pale amber, the stick of jasmine-wood with the bark preserved, and the bowl of a delicate red clay, highly ornamented. According to the dignity of the smoker is the length of his pipe, often six or seven feet, and it is carried by two of his servants from place to place, with much ceremony; also the bowl is supported by wheels as an aid to supreme indolence. In the summer, for greater coolness, the stem of the pipe is covered with cotton or muslin, and moistened with water. This sovereign recreation is not confined to the men; the ladies, especially those advanced in life, partake of it largely; and, as a delicacy, they mix the tobacco with frankincense, musk, or aloes-wood."

The *Jasmine* we now figure is one of the many valuable and interesting discoveries of Mr. Fortune on his first visit to China, where he found it growing in many of the gardens and nurseries, particularly about Shanghai, Loo-chou, and Nanking. Plants were sent to the Horticultural Society's garden at Chiswick, where it was treated as a greenhouse plant. Mr. Fortune wrote as follows:—"It appears to be a greenhouse plant, and grows very freely in rough sandy peat. During summer an ample supply of water should be given to its roots, and it must be syringed overhead once or twice a-day. It is a profuse winter blooming plant, continuing for a long time. It is a very ornamental dwarf shrub, and I have no doubt of its being perfectly hardy in England. It is deciduous; the leaves falling off in its native country early in autumn, and leaving a number of large prominent flower buds, which expand early in spring, often when the snow is upon the ground, and appear like primroses."

It proves quite hardy in England, and blooms from towards the end of November up to March, or later, according to the aspect, or other circumstances, in which it is grown. It blooms the earliest when trained against a wall, or trellis. It forms a nice shrub too in the open ground, and by cutting in the shoots it becomes quite bushy, and when in profuse bloom is very ornamental. It is a cheerful companion

when seen from the dwelling-house, at that period of the year, being a pretty contrast later on for the *Mezereum*, &c. It grows and blooms very freely in pots, and is highly ornamental during the entire of winter and spring for the greenhouse, sitting-room, entrance-hall, &c. A prolonged period of blooming is easily provided for by having plants kept on the north side of a wall, &c., and from thence successively taken in-doors.

The plant merits a place in every greenhouse, sitting-room, garden or shrubbery, from the palace to the humblest cottage.

2. SWAINSONA OSBORNII.

It is a half-shrubby, hardy herbaceous plant, a native of the Darling Downs in Australia, where it was discovered growing by the side of water. We saw it in beautiful bloom in the nursery of Messrs. Osborne and Sons, of Fulham. The plant is very neat, dwarfish, and blooms in profusion. Its pretty pea-shaped flowers are very handsome, and render it deserving a place in every flower-garden. It is a valuable acquisition to the charming tribe of hardy herbaceous border plants. We are glad to be enabled to state, that *hardy herbaceous plants* for the flower-garden are now much sought after, more especially the *showy* bloomers. Their cultivation stands recommended to all lovers of flowers, by a vast variety of form, colours, &c., the ease with which they are cultivated and a collection kept up; also they may be procured at a very cheap rate. As quantities of them are usually kept in pots by the general nurserymen and florists, a garden may be fitted up at any season of the year, and a very trifling cost is only required in their subsequent management.

NOTES ON NEW OR RARE PLANTS.

ACHILLEA COMPACTA.—A hardy herbaceous perennial, two to three feet high. The flowers are produced in large compact heads, in profusion, of a bright golden yellow. Very pretty. When grown in contrast with the *Achillea rosea*, it has a pretty effect. They bloom throughout summer.

AOTUS DRUMMONDII.—A very neat greenhouse-shrub from the Swan River, seeds of which have been obtained by Messrs. Henderson's, of the Pine Apple Nursery. All the *Aotuses* are pretty pea-like flowering plants, the blossoms borne in profusion, but of very small size. The present species forms a spreading stiff-branched shrub, with small heath-like foliage. The flowers are borne in profusion, clothing the ends of young branches for several inches long. Each blossom is a third of an inch across, of a bright yellow, with a red eye. It merits a place in every greenhouse. (Figured in *Magazine of Botany*.)

BERBERIS WALLICHIANA. (Synonym *B. atro-virens*.)—Dr. Wallich discovered this species in Nepal, subsequently Mr. Lobb sent it to Messrs. Veitch's, and about the same time Dr. Hooker discovered it on

the Eastern Himalaya, and sent it to the Royal Gardens of Kew. It is likely to prove quite hardy. It is an upright shrub, which in its own country grows from six to ten feet high. Plants, however, even ten inches high will bloom very freely. The flowers are of a pale yellow colour. The leaves are lance-shaped, two to three inches long, spiny. A neat shrub. (Figured in *Bot. Mag.*)

CÆLOGYNE OCHRACEA.—An orchid from North-eastern India, which was introduced into England by T. Brocklehurst, Esq., of the Fence, near Macclesfield. Each flower is two inches across, white, blotched with ochre-yellow, and very fragrant. (Figured in *Bot. Mag.*, 4601.)

CERASUS ILICIFOLIA.—Evergreen Holly-Cherry. A handsome *evergreen* bush, or small tree, quite hardy. The leaves are waved and spiny as the Holly, and has white flowers similar to the Bird Cherry, produced in spikes. It has fruit resembling a small cherry. It deserves a place in every shrubbery.

CESTRUM WARCZEWICZII.—A greenhouse shrub from Central America. Many of our readers know the *C. aurantiacum*, which bears its numerous large paniced heads of orange-coloured tube-formed flowers; this new species is very similar, but its blossoms are of a rich deep yellow. Both species are very ornamental, and merit a place in every greenhouse.

CÆANOETHUS VERRUCOSUS.—Mr. Hartweg sent seeds of this pretty hardy evergreen shrub from California, to the Horticultural Society. The plants in the Royal Gardens of Kew have stood uninjured in the open air in the Arboretum during the last two winters. The plant in the open air is four feet high, much branched. The leaves are oval, nearly an inch long, dark green. The flowers are borne in corymbose heads at the ends of the shoots, of a pale purple-blue. A very pretty shrub, which is well worth possessing. (Figured in *Bot. Mag.*, 4660.)

CISTUS ALBICANS.—This is an upright-growing evergreen shrub, bushy, a yard to four feet high, blooming most profusely. Each blossom is three inches across, white, with sulphur centre.

CISTUS MACULATUS.—The leaves are neat, small, an upright-growing branching shrub. The flowers are of a rich golden yellow. Each petal has at its bottom a dark velvet spot. The five spots on the bright yellow ground has a very pretty effect. Each blossom is an inch and a half across. It merits a place in every shrub border.

CISTUS TAURICUS.—A bushy shrub, bearing a profusion of lilac-purple flowers, each blossom being two inches and a half across. Very pretty.

CISTUS VENUSTUS.—A very bushy spreading shrub, with deep green, medium-sized foliage. It is a profuse bloomer. Each flower is nearly four inches across, pure white, and at the bottom part of each petal there is a large spot of *bright red*. It is very neat, and deserves to be in every shrubbery.

CISTUS FORMOSUS.—An upright-growing shrub, two feet high, with

small foliage. Each blossom is two inches across, yellow, with five dark spots. Very neat and pretty.

CISTUS VILLOSUS.—A spreading bush, with sage-like foliage. The flowers are of a rosy-lilac colour, each three inches across. Very pretty.

We scarcely need add, that the old Gum Cistus is a fit companion for all the above; no shrubbery ought to be without it. There is a large clump of Cistus in the pleasure ground at Kew, which has been for some time in beautiful bloom, and likely to continue for a length of time.

CYNOGLOSSUM MONTANUM.—A hardy herbaceous perennial, blooming very freely. The flowers are produced in long racemes, of a bright blue. It ought to be in every flower-garden.

DENDROBIUM FARMERI.—A delicate and lovely orchid, sent by Dr. McClelland from the Calcutta Botanic Garden to W. G. Farmer, Esq., of Nonsuch Park, Surrey. The flowers are produced in pendulous racemes from twelve to eighteen together. Each blossom is an inch and a-half across. Sepals and petals of a pale straw colour, tinged with rose. Lip pale straw colour, with the whole disc orange-yellow. A beautiful species. (Figured in *Bot. Mag.*, 4659.)

DRACOCEPHALUM PEREGRINUM.—A hardy herbaceous perennial, one foot high, blooming profusely. The flowers are of a pretty lilac-purple, well deserving a place in every flower-garden.

GENTIANA GELIDA.—A hardy herbaceous plant of much beauty. The plants grow from a foot to half a yard high. The flowers are borne in heads of ten to twelve blossoms in each, and of a rich blue. Each flower is of similar shape to the well-known Spring-Gentian, blue, an inch and a half long, erect. It is a profuse bloomer, and ought to be in every flower-garden. It blooms nearly all the summer.

GLOXINIA VICTORIA-REGIA.—The flower is of medium size, stout, and fine formed. The ground is white, with a blue inside. It is exceedingly handsome.

G. JOSEPHINE DE BEAUHARNOIS.—White, with a stripe of sulphur, edged with lilac at the inside. Very pretty.

G. GENERAL FRANKLIN.—The flower is of good substance and neat form, white, having in the inside a stripe of sulphur, edged with lavender. Very pretty.

G. GRAND DUCHESS HELENA.—White, with a sulphur stripe inside, edged with red. Medium-sized. Very pretty.

G. ARGYROSTIGMA SPLENDENS.—The leaves are large and have white veins, very pretty. Each blossom is two inches long and as broad at the mouth, of a blue-purple, with a white stripe at the inside. A very singular variety.

IXORA COCCINEA SUPERBA.—The flowers are of a deeper colour than the old *coccinea*, and the heads of blossoms as large. The petals, however, are much broader, and of thicker substance, each blossom

being almost round, having a much superior appearance to the *narrow* petals of *coccinea*. All exhibitors of stove plants should have this variety, as well as the *true Javanica*.

LOASA BICOLOR.—An annual from Central America, which was recently introduced to Germany. It is a branching bushy plant, about half a yard high. The flowers are white, with a scarlet stripe, borne in terminal racemes.

LONICERA FRAGRANTISSIMA.—Mr. Fortune sent this Honeysuckle from China to the garden of the Horticultural Society. It is a *sub-evergreen* hardy shrub, bearing small white flowers. Each blossom has a short tube, and the expanded mouth is nearly an inch across. A plant trained against a wall in the garden of the Marquis of Salisbury, at Hatfield, has bloomed this season. It commenced flowering in January. The blossoms are exceedingly fragrant, combining the richness of the perfume of orange blossom with the delicious sweetness of the Honeysuckle.

ONCIDIUM CUCULLATUM.—An orchid from Central America, in Mr. Brocklehurst's collection. The flowers are produced in a raceme of from six to eight inches long. Each blossom is an inch across. Upper petal and sepals of a chocolate-red, with a stripe of greenish-yellow along the centre. Lip large, two-lobed, violet, spotted with purple. Very curious and beautiful. (Figured in *Paxton's Flower Garden*, 87.)

PASSIFLORA ALBA.—A stove species from Brazil. The flowers are pure white at the upper side, and green underneath. Each blossom is about three inches across. It will produce a pleasing contrast when grown along with the high coloured ones. It fruits very freely.

PENTSTEMON HIRSUTUM.—Grows about fifteen inches high, bushy. The tube of the flower is two inches long, lilac at the lower part and white above, quite hardy.

PHLOX DRUMMONDII MAYII.—It is a bushy plant, blooming profusely. The flowers have a pure white ground. Each petal has a *very broad* feathery-edged stripe, of light purple, which is margined with white. It is a very beautiful flowering variety, which blooms for a great part of the year. It has been termed "the ever-blooming." It does well either in pots in the greenhouse, or in the open bed.

RHODODENDRON LEPIDOTUM. THE SCALY.—This is one of the seedlings raised at the Royal Gardens of Kew, from seed which Dr. Hooker sent there from Sikkim-Himalaya, named *R. eleagnoides*, and as such is figured in the splendid work on the Rhododendrons with dark purple flowers, and also with deep yellow flowers, looking like those of a *Helianthemum*. The present plant bloomed in the greenhouse. The leaves are about an inch long. Flowers of a dingy-purple, with a yellowish short tube. Each flower about an inch across when fully expanded. (Figured in *Bot. Mag.*, 4657.)

THYRSACANTHUS RUTILANS. (Acanthads.) It is a stove shrub introduced to the Continental Gardens from Central America, by Mr.

Linden. The leaves are five inches long by two broad. The flowers are produced in drooping racemes, about twenty on each; they are tube-shaped, two inches long, of a brilliant crimson, much like the scarlet trumpet honeysuckle blossoms. It is a valuable acquisition, and appears likely to make a fine *exhibition* plant.

HARDY ANNUALS FOR ORNAMENTING THE GREENHOUSE EARLY IN SPRING.

BY ALPHA.

DURING the last three years I have had my greenhouse beautifully ornamented, amongst other things, with the fine blue *Nemophila* insignis, and the lilac and crimson spotted *Schizanthus pinnatus*, and *S. pinnatus humilis*. Only having in the blues, Hyacinths, and not a lilac, at such early season, I was led to try these two pretty blooming plants, and they prove a most valuable acquisition, the plants producing a mass of beauty. My mode of management was as follows:—

I sow the seeds the first week in August in sixty-sized pots, in a compost of rich loam and sandy peat, equal parts, and one-fourth of the pot is filled with drainage. The seeds being sown, the pots are placed either under a hand-glass, or in a spare seed cucumber frame, shading from sun till the plants are up, and as soon as up the glasses are taken off, and the plants have the benefit of the open air. But a few seeds are sown in each pot, and when the plants are up, all are taken away except three. Therefore the *Nemophila* renders itself a twofold acquisition, in its colour and its easy culture. I sow the seed of it and the *Schizanthus* at the same time as the Mignonette, viz. the beginning of August, under hand-glasses, removing the glasses as soon as the plants are above the surface. When the plants are a good size, I pot them into 60's, one in a pot, if strong, but sometimes three; and I give them a good watering over head, and place them in any sheltered situation, but fully exposed to the sun. About the middle of October, I take the strongest, and repot them in 48's, and tie up the branches to five or more sticks in each pot; I then place them in a cold pit, giving them all the air that is possible. About the beginning of December some will require to be shifted into 32's, to be in flower in February, and the others I shift in succession in 24's. When I shift them into the pots I intend them to flower in, I stick in four willows at regular distances round the pot, and, bending the two opposite, I bring them together at the top in the form of a balloon; those in 32-pots about two feet and a half above the pot, and those in 24's three feet. I then put hoops of strong wire round the willows, the first six inches above the pit, the other eighteen inches above it, securing them firm to the willows. I then tie fine threads of matting at regular distances between the two hoops, to train the shoots to which, when they reach the top, I allow them to hang down on the other side. The reason why I train them in the manner described is this:—if trained on straight sticks, as soon as they get to the top they break down, not being able to support themselves, and thus leave all the top part without any flowers.

Another way, is not to tie them up at all, but let them hang down all over the pot. In doing them this way I keep them on shelves, to prevent their damping off. In placing them in the greenhouse, the pot should be placed above the height of the visitor, it being unsightly, not having many flowers near the roots. Also stakes can be driven into the border of the conservatory, and pots placed on the top, the shoots hanging down and covering the stake. The plant has in this manner a fine effect; in a word, it has only to be seen to be admired.

Last August I sowed seeds of *Brachycoma iberidifolia*, and have had fine pots of them in bloom, both blue, purple and white, since the middle of April, and they are likely to continue all the summer. Their pretty daisy-shaped flowers have a charming appearance. I also sowed seeds of *Leptosiphon androsaceus*, and have had the plants in bloom from March up to the present, the profusion of their lovely rosy-lilac flowers are very ornamental. The young plants were treated in potting and situation as the *Nemophila* and *Schizanthus*. They require but little labour, and amply repay for any.

THE PASSIFLORA EDULIS.

BY J. B., ROYAL GARDENS, KEW.

A FINE plant is grown in the stove in these gardens which, in its blooming and fruiting state, is the admiration of all beholders. It is well deserving of more general cultivation, were it only for its neat-formed, large, pendulous flowers. The varied colours of red, white, green, and black, in each blossom, render it peculiarly beautiful, and entitle it to a place in every hot-house, vinery, &c. The plant here is trained lengthways across the house to a trellis fixed near the glass roof, and I have noticed, both in the Royal Gardens and elsewhere, that the plant blooms and fruits better so trained than when allowed to proceed upwards along the rafters only. When fruit is required, the blossoms must not be sprinkled over with water, and each must be carefully impregnated to secure a crop. After the blossoms drop off, the plant may be duly syringed, which promotes the growth of the fruit. For persons that have the convenience, a pine stove is an agreeable situation; plants grown in pots, and plunged in the bark pit, and trained to the wire trellis near the glass, is deemed a congenial aspect.

The plant seems to require straitening for pot room, in order to throw it into a prolific bearing state, adding to that a copious supply of water in the growing season (avoiding the flowers, as above stated), which should commence about March, in order to get the fruit ready in good time. The plant succeeds well in a light, rich, loamy soil.

It is easily propagated, either by seed or cuttings, the latter being preferable, in order to bring it sooner into a bearing state; two years' old plants being calculated to bear profusely. The fruit, when ripe, is about the size of a hen's egg. The colour is of a dark brownish purple. The shell is thick, hard, and useless. The inside resembles the jelly of a gooseberry, excepting the colour being yellow, and the seeds much larger. The flavour seems to have a three-fold property combined, and

is admirably adapted to the palate of persons in general. It well merits a place wherever practicable. ;

PROPAGATING BOUVARDIAS BY CUTTINGS OF THE ROOTS.

BY A FLOWER GARDENER.

I SCARCELY need to remark that this genus of flowering plants is one of the most lovely. Their beautiful trumpet-shaped flowers, borne in pendulous heads, of rich red, crimson, scarlet, and yellow colours, are highly ornamental. Whether they are grown in beds, in masses, or as single specimens, either in-doors in pots, or grown in the open ground in the flower-garden, they are alike beautiful. I now have plants which have been duly formed during the last three years, from three to four feet high, regularly branching from the pot to the summit, and the branches loaded with the heads of bloom. All the tribe merit a place in every greenhouse, sitting-room, or flower-garden. I grow them in equal parts of rich loam, sandy peat, and leaf-mould, having a good drainage. The plants require little care, and amply repay for any attention. I propagate them both from half-ripened young shoots, inserted in sand, or, which is far easier, by the following method :—I fill some large fruiting pine-pots with good fresh mellow loam, well blended with either thoroughly-rotten dung or vegetable mould. I plant my roots all over the pot, beginning in a circle round the outside, opening the soil and planting them with my finger, and continue filling up one circle within another, till I finish in the centre of the pot, or pots, leaving no more of the roots visible above the surface than just the top. I then water, and place them in a hot-house, at from 60° to 70° of heat by night. As soon as the shoots get to between four and five inches high, I transfer the plants singly into pots of a small size, and by degrees harden them after they have got established. When they have made some progress, I plant them out into a bed four feet wide, eight inches between the rows, and four inches in the row ; where, if the soil be good, many will soon be in flower. I pot them again before frost, and treat as done to older plants.

TREATMENT OF THE GUERNSEY LILY.

BY AN OLD PRACTITIONER.

THIS delightful flowering *Amaryllis* is not usually grown in England in that state of vigour and perfection of which it is capable. I have seen them more than double the size of those which are seen in Covent Garden, or either at the Royal Gardens of Kew or the other public gardens in or about London. The following method of treatment I have proved to be signally successful with it.

In this country we usually receive the bulbs from Guernsey in July or August ; therefore, against the time of their arrival let a compost be pre-

pared for their reception, consisting of good light loam, rotten leaf-mould, and well-rotted old manure, in equal parts, having a liberal sprinkling of white sand. This compost should be formed, and the whole turned over at intervals and well mixed, for at least a year before it is wanted. Strong earth should be avoided, for Guernsey is a sandy soil, or inclinable thereto, where they grow and flourish in perfection; this in some respect has taught us their true culture, and experience demonstrates the practice to be right. The bulbs being arrived, and the compost prepared, let a sufficient number of pots of the size of those common for Auriculas be in readiness, according to the number of the bulbs; fill the pots with the compost, and plant a single bulb in each pot. These pots are designed to form a bed, and having marked out a place, set them in rows of what breadth you please, so that they can conveniently be managed; let the pots be joined close to each other, and fill the cavities between with any common mould; then hoop the beds, for the conveniency of covering them when too great a quantity of rain falls; for by thus plunging the pots, the roots will be kept so cool and moist as to require little or no watering, which is very injurious to these plants. In September and October the flower-buds will show themselves, though not every one; for this reason they should be planted in pots, that the flowering sorts may be collected and placed together, to form a general blow; for this purpose let a shed be prepared for their reception (an Auricula stage will be very suitable); such shed or stage should be in an open exposure, and guarded from violent winds, but where they can have the benefit of sun and air. Gentle watering should now be frequently given, and the shed should be uncovered in fine weather, and constantly covered in wet, otherwise the beauty of the flowers would be much diminished. In hot weather, also, they should be screened from the heat of the sun, for this will hasten their decay. With these precautions, the flowers will exhibit their beauties for a long time. Although I recommend the plants to be placed as described, I beg to observe, they may be placed in the greenhouse or sitting-room, doing it just when they are about to expand their flowers, as they have been previously grown slowly, and in proportion have become vigorous, the blossoms will be of the proper size, but the period of flowering will be shorter. The beauty of superb specimens amply repays for any attention given.

ON PROPAGATING ERICAS FROM CUTTINGS.

BY MR. JAMES SMITH, PROPAGATOR IN BELVIDERE NURSERY, PARIS.

NOT having observed any particular instructions on this subject in your Magazine, and as we annually increase our stock of *Ericas*, *ten thousand at least*, I therefore forward you the mode of operation we pursue.

The general season of putting off cuttings is from the middle of April to July, as the young shoots are then properly ripened for the purpose. I must observe, however, that *whenever* the young wood is

become somewhat firm, it is in a proper state to strike root, and may be put in the cutting pot.

By a series of practical experiments, it has been found that the old wood of *Ericas*, as well as many other plants, is by no means calculated to produce roots; and having *proved* that the young wood succeeded best as cuttings, the only thing to be looked for was a warm, open, yet partially retentive medium best calculated for them to strike root in, and sand is found to be the best. A good deal depends, in my opinion, on the choice of sand for this purpose; many prefer the whitest and finest they can procure; at all events *pit-sand* is the most proper; but, from recent observations, I am inclined to think that its goodness does not depend so much on the colour as the texture, a lively vegetating sand being, in my opinion, preferable to that of a dead, fine, binding nature, be it ever so white; but it should be a pure sand, untainted with any mixture whatever. The manner of using it is to have the pot well drained as usual for cuttings, and then filled with sandy peat within an inch of the rim, which must be pressed pretty tight so as not to sink much afterwards; let the remainder be filled with the sand and well levelled at the top, being also pressed tight; the whole should then get a good watering to settle it before the cuttings are inserted. Now we proceed to make the necessary quantity of cuttings to fill it, and the sand will be soaked sufficiently, and fit to receive them by the time they are ready. *Strong, luxuriant, or leading shoots* are not chosen, as from their redundancy of sap they are exceedingly liable to damp; the ends of the lateral or side shoots are, by experience, proved to answer infinitely better when selected with judgment, so as care is taken to reject any that have in the least degree attained a *hard* woodiness of substance, or that cut wiry and tough. They need not exceed an inch in length, two-thirds of which is to be divested of its leaves, and finished by a clean horizontal cut at the bottom; but in taking the leaves off, it is necessary to be careful not to injure the bark of the cuttings by paring them too close, but rather to leave a part of the footstalk attached to it. When a sufficient number is ready, we have them immediately inserted in the sand with a small neat dibber, something about the size and shape of a goose quill; they are pretty well tightened in the sand, and should have a moderate sprinkle of water to settle it about their stems. A proper glass being previously chosen, when they have stood about half an hour to drain and settle, it is set on, pressing it gently on the surface so as to make it perfectly loose. When this business is performed in hot weather, the pots are plunged in some cool shady situation, where they can be conveniently shaded when requisite; an exhausted hotbed, with a frame and good lights on it, answers very well; or otherwise the north side of any low wall or hedge where they are a little sheltered from the noon-day sun, and have the benefit of it morning and evening; in either place the pots are plunged up to the rim in old tan or saw-dust, and in the latter they also require to be covered with large cap-glasses over the small ones. When potted and watered they are set in small box frames on the kirbs, or other convenient places in the pit for a few days, and shaded until they have established themselves in the fresh

mould; as soon as they have taken to grow freely, they are removed to the greenhouse, but not exposed to the open air entirely at first, as it might do them a material injury; on account of which the lights over them are kept closer than usual for a few days.

MISCELLANEOUS SECTION.

BORONIAS.—All the species are neat growing shrubby plants, and when in bloom are very pretty. They merit a place in every greenhouse. The *pots* in which they grow, should always be kept *clean* at the outside; if the pores be closed up by a green coating, &c., the plants will be sickly in proportion, and ere long will perish. The *drainage* should be one-fourth the depth of the pot, it must consist of a broken pot, over which a layer of chopped moss must be placed to prevent the compost choking up the potsherds, so as to prevent the water properly passing away. The *compost* must consist of good turfy sandy peat, which has been obtained from its original moor for several months, and been kept in a situation where it has freedom of air and rain, one-half, which must be well chopped up, and retain its openness, the pieces being left as large as marrow peas up to common marbles. The other half must consist of bits of charcoal and well decomposed (two year old) cow-dung, pot, and well decomposed leaf mould, in equal parts. These being well mixed, form a compost in which the *Boronias* grow most admirably. Plants sometimes perish *suddenly*, this will be occasioned by either a *want* of water, or when grown in a *close* soil that retains the water, thus the soil becomes sour, and injurious to the plant. To form the plants bushy, pinch off the heads of the shoots to cause the protection of laterals. A *free* admission of air is essential to its well doing.—(*A London Exhibitor of Greenhouse Plants.*)

DRYING SPECIMENS.—Noticing that one of your correspondents requests additional information on this process, I beg to state, he may take most of the *plant* specimens out of the paper they have been dried in for three days, but the *delicate* ones after being in twenty-four hours; he must then place them in dry paper, having a couple of *quires* under and *one sheet* over, then proceed to iron them with a common smoothing iron, moderately hot, by this process he will find the *colours* preserved in a much superior degree than by the method which has long been in common use. I have a large collection, made in Italy and the south of France, mostly dried in this manner, and many dried thus in 1835, are still perfect in their colours; even the common Broom (*Cytisus scoparius*), which usually turns black (both blossom and leaf), and the flower of the blue Campanula, which becomes white, perfectly retain their colour when dried in this manner. Care is required to have the iron sometimes less hot, and sometimes more so, according to the different sorts of plants to be acted on; but this must be learned by experience. This process of drying prevents the necessity of dipping plants, such as Heaths, which have a tendency to cast their leaves in the drying, into

scalding water, or any other mixture, as the hot iron effectually destroys the vitality at once. It has been found useful to lay silver paper, dipped in a strong solution of alum, on the specimens.—*Clericus, Middlesex.*

PROFESSOR FORBES'S LECTURE, *June 3.*—On this occasion Professor Forbes entered into an investigation of the general features of the plants considered as constituting a *genus*. He observed, that if we go into the fields and collect a number of plants, they would be found to agree in certain minute and general features, and a certain number would constitute what botanists term a genus; which was simply an assemblage of species, but each having a certain peculiar collective character of its own. He remarked that the term *species* had been explained by him more particularly, at a previous lecture, as being the assemblage of descendants of an individual plant, the seed of which would not produce individuals of another species, or presenting different specific characters. The scientific name of each species indicates the genus as well. Thus in the case of "*Erica Cavendishii*," *Erica* forms the generic name, and *Cavendishii* the specific name. The substantive (*Erica*) is used to designate the genus, and the adjective (*Cavendishii*) to express the species. In this case the specific name is not given merely in honour of a distinguished patron of botany, but for convenience in arrangement. It was next observed that different botanists gave different names to the same plants in published descriptions. Thus it was not unusual to meet with instances of one botanist giving a name to a plant that had already been described by some other botanist under a different name. The usual course, however, was to adopt the name that had been first given. The Professor next entered more particularly into the consideration of the term "*genus*" in its relation to tribes, families, orders, and classes, remarking that these terms were all used to express the several groups into which plants had been arranged, and that in speaking simply of a group of species the word "*genus*" was used in a restricted sense. In speaking of a certain Heath, as *Erica vagans*, for instance, it was not meant to make any reference to the higher classes, but only to speak of it with reference to its genus and species. He then illustrated this part of his subject by referring, at considerable length, to the generic character of a Buttercup, as given in one of the *Manuals of British Botany*, pointing out the several parts which combined to distinguish it from any other plants with which it is allied. In the diagnosis of this genus, as given by botanists, we find, said the Professor, that the calyx is composed of five (rarely three) sepals or outer whorl of sepals, and that they are separate. Then, again, the petals are stated to be five, rarely numerous, with a nectariferous pore at the base. Here it was shown, by means of diagrams, that the petals of this genus differed from most others in the same group by having its nectariferous pore covered by a scale, which is found to be present in all species of *Ranunculus*; and though other plants possessed the nectariferous pore, in none of them it combined with the features that accompanied it in this case. Attention was next drawn to the carpels, which, it was observed, were arranged in globular heads, and not bursting. The stamens and style were said to be "*numerous*"—a

term used by botanists when the number of these organs was above ten or thereabouts. The Professor next explained that all the generic characters were taken in this way from the different parts of the floral organs, and not, as in species, from the leaves and similar trivial features. He next noticed the points of difference between a genus and a tribe, explaining that the latter was simply a higher group of plants, comprising different allied genera, as a genus included different species. He pointed out the relation between the Mousetail (*Myosurus*) and the Ranunculus or Buttercup, stating that these two genera differed from each other in certain particular characters, but agreed in others, as in their imbricate æstivation (a term which he explained to mean one of the modes in which the leaves are arranged in the bud), also in the arrangement of the carpels, those of the Ranunculus forming globular heads, and of the Mousetail a long slender fasciculus, like the tail of a mouse—hence its name. Both these genera were quite different; but because they agreed in certain essential features, they were grouped together, and were said to belong to the same *tribe*. The Professor next adverted to the groups of plants forming natural *orders*, as Geraniaceæ, Papilionaceæ, and others, which were marked by certain peculiarities of structure, but which were all arranged according to the same plan. It was observed, in reference to those having pea-blossom flowers, that the terms Leguminaceæ and Papilionaceæ were employed by different botanists to express the same group, which, besides having this peculiarity in the form of the flowers, also agreed in having their seeds in pods. The group of Composite plants was next noticed. This group, it was remarked, contained several hundred genera, and about 19,000 species, all agreeing in certain general features, and of which the Thistle, Cineraria, and Dandelion were named as examples. The plants in this group were sub-divided for the sake of convenience into other groups, such as the Flosiculose, the flowers of which division consisted of a number of small distinct tabular flowers, or florets, arranged together in the form of a head. Of these the Dandelion and Lettuce were cited as examples. In certain other genera of the same large group, the central florets only were found to be entire or perfect; those of the circumference or ray wanting the anthers. The mode of ascertaining the generic character of a plant was then shown by reference to several specimens on the table. In particular, the flower of an Iris was examined, and its different parts explained. Here it was found, after removing the two whorls of outer segments, three of a smaller size remained in a position interior to the stamens: these apparent petals were in reality the stigmas; and in this genus, from their peculiar form, they were called *petaloid*. Botanists, it was remarked, laid great stress on this character, as well as the reflexed position of the petals forming the perianth. As another illustration, the structure of the Lupin and its generic characters were pointed out and fully explained. The Professor then concluded his lecture by a few interesting observations on the distinction between a Geranium and Pelargonium, the object of his discourse throughout being to illustrate by familiar examples the principles upon which natural groups, and especially those restrictedly termed genera, are defined by botanists.

AUGUST TREATMENT WITH PELARGONIUMS.—The cut-down plants of July will now have pushed sufficiently at the eyes to be shaken out and disrooted, and with a sharp knife take off all straggling roots; repot them into some open soil, with two inches of drainage at the bottom of the plants, potting them into 5 or 6-inch pots according to the quantity of roots, that is, if they were previously in 8-inch pots; keep them in a close frame or house till they get established, just damping them over head with a fine rose three or four times a-week. As soon as they have recovered from the shift, air may be abundantly given night and day, sheltering them from heavy rains, and keeping them clean from green fly. *Cuttings.*—Now is the time for making a foundation for another season, that is, when plants are cut down: continue to cut down plants as they go out of flower.—(*Dobson's Treatise.*)

RED SPIDER.—The recent dry and very hot weather has been favourable to the progress of this destructive insect, and many complaints relative to its ravages in collections of in-door flowering plants have been sent us, as well as information solicited, as how the Red Spider could be destroyed without damaging the plants. We have replied by letter to all applicants, but as others may have still to contend with the adversary, we repeat here what we have stated in previous parts of our Magazine; viz., let a mixture of lime and sulphur be made to the consistence of the usual whitewash, and where there are brick or other flues, or hot-water pipes, let them be washed over with the mixture, doing it towards evening; after the sun is off close the house or pit, and let the flue or hot-water pipe be heated to a *gentle warmth*, and the fume from the sulphur and lime will be sufficiently diffused throughout the house to destroy all the insects. The following morning early syringe the plants, and let there be a full admission of air to the house all the day, and the succeeding day also. If by any casualty the entire destruction of the insect has not been effected, let a little more sulphur be added than before, and repeat the necessary heating, &c. Guard against having the flue or pipe *too hot*. We never knew the application to fail; and having applied it on many occasions on plant-houses, vineries, &c., we never had either plant or vine damaged by the operation.

BEAUTY OF FLOWERS.—There is not a plant but on minute investigation will reveal some peculiar beauty, or some exquisite adaptation, to reward the attention bestowed. What we despise as weeds, and condemn as inconspicuous, are only so in relation to our superficial view.

For a garden we select such plants as are suitable, on account of the size and brilliancy of their flowers, or of the unusual elegance of their foliage. But in a landscape individual beauty is subservient to general effect. Even a mass of hemlocks or nettles is not without its relative beauty. The garden is cultivated for the sake of some favourite flowers, often unjustly, to the disadvantage of many that cannot be confined within artificial boundaries. For a landscape, *foliage* is the principal requisite, and thus every so-called weed has its appointed service. . . . Some flowers are common to both garden and country. Violets, Primroses, Snowdrops, Lilies of the Valley, &c.,

are as sweet in their wild haunts as in the protected enclosure. Many not found in the garden are splendid in their wild independence, such as the Mullein, Fox-glove, Viper's-bugloss, Speedwell, and the curious tribes of Orchis. Daisies, Buttercups, Anemones, Cowslips, Harebells, Vetches, &c., are more welcome in their wild habitats.

Varied beauty is thus spread over the surface of the habitable globe, and cannot fail to delight every mind that is not blighted by the wretched conventionalities of the world, benumbed by cold utilitarianism, or besotted by selfishness.

" Nature never did betray
The heart that loved her ; 'tis her privilege,
Through all the years of this our life, to lead
From joy to joy ; for she can so inform
The mind that is within us, so impress
With quietness and beauty, and so feed
With lofty thoughts, that neither evil tongues,
Rash judgments, nor the sneers of selfish men
Shall e'er prevail against us, or disturb
Our cheerful faith, that all which we behold
Is full of blessing."—WORDSWORTH.

(*Beauty of Flowers in Field and Wood.*)

AUTUMN AND WINTER-FLOWERING PELARGONIUMS.—For autumn flowering I have found the following the most desirable, being free-blooming kinds, and strong growers :—Forget-me-not (Lyne), a fine high-coloured flower, and one which will be found to give satisfaction to all who grow it ; it will also force well in the spring. Meteor (Beck), a showy flower, and well adapted for late purposes. Negress, a dark flower, and very free ; also adapted for spring forcing. Sultana, or Perpetual, of dwarf close habit, and free flowering. Gauntlet, a fine large bright flower ; also well adapted for early spring forcing, as it will stand a very high temperature without going blind. Selina, a bright red, and beautiful variety ; this is also well adapted for early spring forcing. Lady Mary Fox, a bright red ; this, with a little warmth, will be found to flower all through the winter, and, as a bouquet flower, is most desirable ; it will be found a beautiful bedding plant, if cultivated to that end, being a most profuse bloomer. Quercifolia coccinea, a bright scarlet-flowered oak-leaved variety ; this will force well, and is invaluable for bedding purposes. Duke of Cornwall, an established favourite, of fine high colour, and good trusser ; this may be forced successfully with the second crop in spring. Mrs. Johnson (Dennis), a flesh colour, and most profuse bloomer ; will be found to contrast well with the other colours. Laneii, a variety which should be grown by all who require winter flowers, as it will flower through the whole of the winter, and stand a high temperature in the spring. When the beauty of the plants is not so much an object as the flowers, they should not be cut down, or re-potted, when housed early in autumn. A few of the fancy varieties will be found distinct and free bloomers :—Anais, Jenny Lind, Fairy Queen, Queen Superb, Statiaski, and Sidonia. The following, for early forcing, will stand the most fire heat :—Admiral Napier, red ; Alba multiflora, white ; Surpass Admiral

Napier, red ; to be followed by General Washington, red ; and Colleyanum, purple ; with such others as I have enumerated above. SCARLETS must not be neglected, they are beyond all others ; and now the collection of this lovely section is nearly all that can be desired as to form, colours, &c.

HAMMERSMITH (near London) PANSY SOCIETY'S SHOW.—The following varieties were exhibited, by which list our readers may perceive what are the finest formed and best coloured kinds in the south of England, and they may fully depend on the excellency of the flowers.

1st Collection (*Amateur Growers.*)—Mr. S. Treacher, Wycombe, with Juventus, Duke of Perth, Queen of England, Masterpiece, Lady Carrington, Pandora, Aurora, Timour, Flower of the Day, Royal Visit, Diadem, Duchess of Rutland, Lord Carrington, Maid of Athens, Nimrod, Lucy Neal, Helen, Supreme, Constantine, Thisbe, Almanzor, Iron Duke. Sambo, Kate ; 2d, Mr. A. Lane, with President, Climax, Pompey, Ethelred, Royal Visit, Ophir, Matchless, Sir P. Sydney, Maid of Athens, Disraeli, Diadem, Queen of England, Androcles, Mr. Beck, Blanche, Timour, Mrs. Trotter, Elgiva, Helen, Duchess of Rutland, Polyphemus, Aurora, Eustace, Exquisite, Rubens.

Nurserymen : 36 varieties.—Great Britain, Mrs. Hamilton, Robert Burns, Almanzor, Gliff, Duke of Perth, Lady Emily, Euphemia, Thisbe, Seedling, Duke of Norfolk, Sir R. Peel, Adela, Royal Visit, Duke of Rutland, Miriam, Alfred the Great, Privateer, Sir J. Cathcart, National, Morning Star, Pompey, Sir J. Franklin, Sir J. Paxton, Seedling, Diadem, Aurora, Supreme, Sambo, Mr. Beck, Criterion, France Cycole, Seedling, Seedling, Black Diamond, Pandora ; 2d, Flowers dissimilar from the first stand were, Laertes, Queen of England, Hercules, Lady Carrington, Grace Darling, Flower of the Day, Pride, Timour, Kate, Ophir, Elegans, Mulberry, Polyphemus, Constance, Constellation, Royal Purple, Royal White, Rotunda, Commander-in-Chief, Masterpiece, Nox, Rubens, Rotunda (Hunt's), Androcles, Lucy Neal, Cowper, Post-captain, Helen.

The following were shown at another meeting on the first stand :—Sir J. Cathcart, National, Sir J. Paxton, Gliff, Diadem, Euphemia, Great Britain (Parker), Duke of Perth, Adela, Pompey, Sir R. Peel, Sambo, Blanche, Mrs. Hamilton, Bellona, Thisbe, Elegant, Rising Sun, Duke of Norfolk, Juventus, Ophelia, Royal Visit, Climax, Queen of England, Rainbow, Alfred the Great, France Cycole, Chieftain, Lady Emily, Supreme, Robert Burns, Caroline, Commander-in-Chief.

HOLLYHOCKS.—These may be propagated by cuttings of the flower stems, if the stems are not too much exhausted by the flowers before the cuttings are put in. Thus, when the flowers are becoming shabby, cut the plants down ; and, commencing at the bottom joints, continue to make cuttings on the plan recommended by Mr. M'Millan, until the wood is too soft for that purpose. These should be put in under a frame or handglass, on a very *slight* heat, the soil being gritty sand, loam, and leaf mould in equal proportions. Water very cautiously, but sprinkle the cuttings lightly every day if the weather is fine. The plants are developed out of the accumulation of adventitious matter and buds formed at the base of each cutting.

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FLORAL

OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

THIS month is the best time for propagating plants for turning out into beds next year; they get well rooted, and having the leads stopped, are bushy plants by winter setting in, and are well prepared to stand the effects of it without injury. Examine the effects of colours in your beds, and investigate their combinations and contrasts, so as to improve and vary the arrangement another season. To keep up the interest of a garden, especially if planted on the grouping system, requires some considerable skill and forethought to vary the scene in each succeeding year, so as to prevent the arrangement becoming monotonous. Thus if warm colours prevail to any material extent this season, it would be as well to introduce a majority of cold colours next season, and to edge each bed of the latter with its complimentary warm colour. Indeed, the system of edging beds with contrasting colours imparts a highly interesting feature, especially to such as may be distributed over the lawn without any methodical arrangements.

FLORISTS' FLOWERS.—*Auriculas*, or *Polyanthus*: seedlings that have hitherto been kept in pans or boxes may now be potted singly in small pots. *Carnations* and *Picotees*: proceed with the layering, which should be completed as soon as possible. Water over head with a fine rosed pot as often as necessary. *Pinks*: pipe the second crop of weaker shoots immediately. Plants for next year's blooming are better *planted out now*, or at least as soon as they are fairly rooted. The beds should be made of well-decomposed dung, sound loam, and leaf-soil, equal parts. The reason why we prefer planting at this time is, that the plants get well established, stand the winter better, and lace much more correctly than when the planting season is deferred. *Cinerarias*: as the plants which have been turned out into the open border throw up suckers, they should be carefully removed, potted into small pots, and placed in a cool shady frame until sufficiently established. Sow seed in a light rich soil, and pot off the plants as soon as they have attained sufficient size. *Dahlias*: continued care will be necessary in thinning out laterals as they appear, and securing such as are left against being broken by wind. Lighten up the soil around the plants with a fork, carefully avoiding injury to the young fibres. Towards the middle of the month add a layer, one or two inches deep, of rotten dung around the plants; avoiding such application, however, to all those with large or coarse flowers. *Tulips*: off-sets should be planted towards the end of the month. The bed should, therefore, be prepared, and consist of river-sand and fresh loam in equal portions; plant the young bulbs from two to three inches deep, and let the sur-

face of the bed gently slope from the middle. *Hollyhocks*: where increase is desired, as soon as the flowers fade, the stems should be cut down, and the surrounding surface of the soil stirred up, adding thereon a little well-decayed manure; this will induce them to shoot up vigorously, and afford a numerous division, or they may be increased by cuttings. *Pelargoniums*: if the plants cut down last month are not already potted, they should be done at once; some of the cuttings, too, which were potted early, may require another shift. Seed should be sown in pots of light rich soil. *Rose* budding should be completed as early as possible. *Pansies*: continue to propagate, and save seed from the best varieties. *Chrysanthemums* should be re-potted into larger pots for blooming, using a rich soil, and giving an abundant supply of water.

IN THE GREENHOUSE, COLD FRAME, &c.

Light is now more than usually important to elaborate and consolidate the juices before the winter arrives; for unless every means is taken to accomplish this, we may expect sad failures during the next winter among our tender and more valuable exotics. To protect them from rain, and to expose them to light, should now more than ever be our earnest study, in regard to choice specimens, especially those which have been recently shifted, and which are in vigorous growth. Almost all the soft-wooded stove-plants that can be grown into large specimens by one or two seasons' growth, like *Pelargoniums*, may be conveniently treated like that popular tribe; cut them back after they are done flowering; keep them dry for a week or ten days, and then shake them out of the mould; shorten their large roots, and pot them in light rich compost in as small a pot as their roots can be got into. Where a conservatory is to be kept gay all the year round, this class of stove-plants is by far the most useful.

Greenhouses and frames, while they remain empty, should be thoroughly cleansed, repaired, whitewashed, and painted. Cleanliness is not only essential to their appearance and preservation, but to keep the plants in a healthy condition.

BRIEF REMARKS.

SUPERB RHODODENDRONS, AZALEAS, &c.—The exhibition of American shrubs, &c., now in the garden of the Royal Botanic Society, Regent's Park, is a grand display of beauty, and ought to be visited by all who have the opportunity. Only visitors can form a just idea of this splendid display. Mr. Waterer's court presents a very extensive and beautiful display of bloom. Here one of the best varieties of *Rhododendrons* is to be seen in fine condition, the flowers being remarkable for their rich and distinct colour, while the plant, or rather tree, measures about seven feet through, and is profusely flowered. It is called *Eleanor Cathcart*, in compliment to the lady of that name. The flowers are of a rich rose colour, and produced in trusses of good shape. At first sight they resemble the flowers of a highly-coloured *Geranium*, being beautifully tinted, and well marked with deep spots. This variety is certainly one of the gems of the exhibition. The others which we noted as worthy of special mention are the following:—*Roseum elegans*, a delicate rose-coloured variety, having large trusses of flowers, which are marked with green. *Grand Arab*, rich crimson, spotted with black; this is one of the most glowing kinds, and the flowers are produced in great abundance. We learn that Mr.

Waterer has the largest plant, with one exception, in cultivation of this—that exhibited here; it is very handsome, and covered with bloom. *Album elegans*, a fine white, or delicate pink, spotted with green. *Atrorubrum*, rosy-crimson, of good shape and large truss, a very fine variety. *Perspicuum*, one of the best white sorts, faintly tinged with rose and spotted with green; it is a most profuse bloomer, and the flowers are large and well formed. *Juba*, a very fine late rose-coloured sort, having the corollas much spotted: the plant of this (the original) is large and handsome; the trusses, however, are only of moderate size. *Luciferum*, a beautiful light pink, having large trusses of well-formed corollas; it is a remarkably free-flowering sort. *Hyacinthiflorum*, double light pink; a singular and pretty variety. *Maculesum*, pink; of this there is a large standard covered with bloom. *Gloria triumphans* (Waterer's), of a delicate pink colour. Besides these, many others might be named, did our space admit of it. *Roseum elegans*, in particular, of which there are many large standards in this division, forms an object of great attraction. *Marriageanum* (Waterer's), a magnificent crimson, very handsome in habit and the form of the flowers, the foliage also is good; this will doubtless prove an acquisition. *Melanthauma* (Waterer's): this variety is very remarkable for its dark purple or violet coloured flowers, which are produced in great profusion; as a beautiful dark variety it is unsurpassed. *Sun of Austerlitz*; a fine specimen of this choice crimson variety was in fine flowering condition. *Atrorubens*, a very handsome rose-coloured sort, of good habit and foliage. *Blandyanum*, a glowing crimson, prettily spotted, and very choice. *Blatteum*, a good purple, shaded with crimson, and having numerous dark spots; the trusses are very large, and, being freely produced, render this a first-rate variety. *Captivation*, rosy-crimson, with black spots; also an excellent sort, and late in flowering. *Nobleanum bicolor*, a beautiful rose-coloured variety, having a white throat. The Duke of Norfolk, clear bright rose, and very attractive in form as well as colour. *Vestitum coccineum*, a most superb rosy-crimson, beautifully spotted. *Leopardii*, rosy-lilac, intensely spotted with crimson; a very large and fine variety. *Pardoloton*, a dark crimson-purple; very showy. *Magnificens*, delicate rosy-pink, and prettily spotted. *Victoria*, a beautiful scarlet variety, shaded with purple, having large and compact trusses. Of those of still more recent introduction, we may mention *Lefevreanum*, a superb violet-crimson, with black spots. *Rhodoleucops*, delicate rose, with white throat. *Martini*, purplish-crimson, with dark spots. *Melanostichilum*, light rose, intensely marked with chocolate spots. *Johnsonii*, a dark scarlet, and well marked, having a large truss, and being a very profuse bloomer. Mr. Baker's collection is still in fine condition. There are several large and profusely-flowered examples of *Catawbiense*, a beautiful light-rose variety, besides one or two seedlings of the same kind, but different in colour, and of considerable merit. Here, also, many fine *Azaleas* are in high perfection, such as *Gloria Mundi*, a rich orange-scarlet variety; *Mammoth*, a profuse bloomer, and remarkable for its handsome truss of rich rose-coloured flowers; *Alta-clerense splendens*, a glowing crimson variety, with fine foliage; *Bouquet de Flore*, rose colour, large and well formed, with dark spots; *Maculata grandiflora*, a very fine sort, having large handsome flowers, with dark spots and good foliage; *Delicatum*, a beautiful white, the flowers large and handsome, with light brown spots. Messrs. Standish and Noble's division presented a rich and varied display, the plants, so to speak, having reached their climax. The more noticeable were *Elegans*, a bright rose-coloured variety; *Geranoides*, one of the best and most distinct, in the way of *Eleanor Cathcart*; *Metaphor*, a fine rose-coloured sort, having large trusses, which are produced in great abundance; *Blandyanum*, several good plants of this rich crimson variety; *Album elegans*, a delicate white, spotted with green, the trusses large and handsome; *Lord Broughton*, deep rose, and finely spotted—a good dwarf flowering sort; *Menziesii*, delicate light rose, also flowering freely when of a small size; *Captivation*, of a glowing red colour, of fine bushy habit, and altogether very beautiful; *Gloriosum*, a delicate white, the flowers produced in great abundance; *Towardii*—this fine variety is still in excellent flowering condition; *Erectum*, deep rose, a desirable and free-flowering kind; *Illuminator*, somewhat like the preceding, and equally good; *Antony*, fine light rose, the flowers large, and produced freely on small plants, *Perspicuum*, a beautiful white, one of the very best of the kind; *Clarinda*, delicate rose, of fine dwarf habit. *Lord Carlisle*, of a fine rosy-purple colour, distinctly spotted with chocolate colour; the truss is neat and compact, the flowers are well formed, and open on small plants. *Noble-*

anum, lively rose colour, not much spotted; truss of moderate size, but well formed; flowers of good shape, and foliage fine. Albion, rose colour, corollas much spotted and well formed; this is a beautiful variety. Capitatum, lively rose colour, lower petal rather pale, but distinctly spotted above; a very free-flowering variety. Candidum, delicate lilac, large, and spotted with green; a most desirable sort. Sir Walter Scott; at first sight, this, when only partially open, presents two colours, the blossoms when half expanded being rich vermilion, becoming a delicate rose colour when quite blown; it has a very beautiful appearance, the flowers being well formed and distinctly spotted. Geranioides, a glowing vermilion variety, with a dense cluster of very dark spots, almost resembling a blotch on the interior of the upper petal. Towardii, one of the finest of all, remarkable for its large and handsome truss having the outline of a beehive; the corollas are equally well formed, and large. Vervœneanum, a unique double lilac variety. Coriacea, an exquisite white, with brownish spots. One, appropriately named The Dwarf, was only about eight inches high, yet had several trusses of its pretty flowers expanded.

EARLY STRAWBERRY.—I observe a notice from Ireland of a dish of Strawberries, gathered from plants of Cuthill's Black Prince, in the open air, on the 26th of May. On that day my gardener gathered a dish of the same sort, grown under exactly similar circumstances, under a south wall, from plants put in last autumn. —*A Constant Reader, Sandhurst, Kent, June 8.*

ISLAND OF JAVA.—Observing in your notices of New and Rare Plants that many superb ones come from this island, I send you a few remarks from notes I made when there:—

"This is one of the finest and most fruitful of the Sunda Islands. Its form is nearly that of an oblong square, which is traversed from east to west by a chain of large mountains; these exhibit the remains of ancient volcanos, which are now clothed with the vegetation of many ages. The fine new species of *Rhododendron* lately introduced into England are inhabitants of such situations. The mountains, in most instances, are covered with almost impenetrable forests, and, with a few exceptions, the soil on them is fertile. Between those of the first, or grand, and those of the second series, are immense plains, some of which are much elevated above the level of the sea, and on these the cold is sensibly felt. They are the most densely inhabited and best cultivated portions of the island. In some parts the heat is oppressive, rising occasionally above 107° Fahr., with from 20° to 25° variation in twenty-four hours. Notwithstanding this, however, taking it altogether, the climate away from the swamps, is healthful and pleasant, the perpendicular sunbeams being considerably cooled by the sea and land breezes. On the tops of some of the mountains it is not uncommon to find the temperature in the months of May, June, and July below 29°, and occasionally even lower, and ice a quarter of an inch thick may often be discovered on the ponds. The two monsoons, the dry and the wet, are latterly not at all regular. The former, during which easterly and south-east winds prevail, generally commences towards the middle of April, and continues until November, and sometimes as late as December. The rainy season is accompanied by westerly winds, and both monsoons by severe thunderstorms, but more especially the wet one. The land is richest near rivers and in valleys, and even near towns, where it is employed in the production of vegetables; it requires very little manure or labour to cause it to yield heavy crops. Java produces rice in large quantities, coffee, sugar, pepper, indigo, cochineal, nutmegs, cinnamon, maize, &c. The latter is grown on the hilly parts, where it is too cold for rice. Maize does not suffer from cold until the temperature falls below 45°, and, on the other hand, no degree of heat is injurious to it. It supplies the natives with the greater portion of their food."—*Clericus.*

FORCED ROSES IN POTS AFFECTED WITH MILDEW.—Roses in pots are subject to mildew from a low, close, damp atmosphere in the house or pit, and the remedy is obvious. In such structures, where the atmosphere is in a great measure under the control of the manager, it is his own fault if the internal air is not rendered sweet and wholesome. Whenever the mildew appears, raise the heat of the house, give abundance of air on all favourable occasions, and be careful that there is no more water used than is absolutely necessary to keep the plants growing and healthy. The floor of the house should be kept dry and clean, and every decayed leaf removed. The soil on the surface in the pot should be frequently stirred, to prevent moss and lichens from growing, for these are not only unsightly, but positively injurious, by retaining moisture, and thus giving out a bad, unwholesome,

and disagreeable air, or, more properly, miasma, which is offensive to the organ of smelling, and must be greatly injurious to the plants that are constantly exposed to its ill effects. If, notwithstanding all these remedial measures, the mildew still appears to spread, then procure some flour of sulphur, as it is called, and dust it over the leaves affected; the parts that are mildewed will retain it, and its pungent qualities will destroy it; and as soon as that is effected, let it, some fine dry morning, be washed off with the syringe.

Very lately we had occasion to visit an establishment not a hundred miles from London, and were shown a house full of forced Roses, upon which the mildew had made its appearance in great strength, and no wonder! The roots were standing upon a bed of wet sand—the walks were wet and slippery with mud—the house had very little air—and the smell arising from the wet and mud was exceedingly strong and offensive. No wonder the mildew flourished under such circumstances! and we are fully persuaded that the cause why it has prevailed so extensively lately, in some places, on *the vine*, arises from the same circumstance in a great degree; and, until such circumstances are remedied, it will prevail still more extensively.

Let the grower of Roses in pots for exhibition, or for any other purposes, then, be careful to keep the air in his Rose-house sweet, dry, and wholesome, or he may depend upon it the mildew will quickly make its appearance, and render nugatory all the care, expense, and trouble he may have put himself to.—*Cottage Gardener*.

NOTES ON A FEW GOOD POLYANTHUSES, by the Editor of the "Midland Florist," when on a Visit to a celebrated Cultivator in Derbyshire.—Mr. Godwin's Polyanthuses were very strong and in fine bloom. They were grown in large pots, plunged up to the rim in sawdust. Amongst the sorts which were particularly fine were Hufton's Lord Lincoln, a really splendid sort, and, when well grown, comes very nearly up to the standard of a perfect Polyanthus. We have seen this fine sort very well done this season by our friend Mr. Samuel Hammond, of Radford, near Nottingham. As a red variety, certainly the very best was Addis's Kingfisher. This we noticed favourably when sent to us as a seedling for an opinion, and we are glad to find it still maintains its reputation. It trusses remarkably well; we have seen it this season with fifteen fully-expanded pips, fit for any exhibition. Croshaw's Exile was also very good, though in its character partaking somewhat of Hufton's Earl Grey, a slight foxiness being perceptible between the ground and body colours. Cheshire Favourite was extremely well bloomed, and certainly must hold a high position, being a very steady and well-laced dark flower. There are several pots of Bullock's Lancer, a lively crimson variety, nicely laced, but not so large as Kingfisher. Buck's George IV. was very strong and luxuriant, but what it gains in size it loses in neatness; still we should say that this would be a good parent, crossed with such sorts as Lord Lincoln and Cheshire Favourite. Amongst others, there were some strong plants of Alexander, an old sort, which is not often seen in this part of the country. Its rich dark velvet ground colour and bright yellow lacing make it very attractive, but it wants smoothness of lacing and a somewhat better form. Ordoyno's or Bowley's Bolivar was large, but coarse. The ground colour of this flower is too large in proportion to the yellow, as was the case also with Lakin's George Canning. Mr. Godwin gave us to understand that his plants were grown in one-half decayed turf, the other half being rotted leaves and sharp sand, in equal proportions. He considers that they should be kept from the direct rays of the sun as much as possible; and when expanding their blooms, an occasional dose of weak liquid manure, made with sheep-dung, he finds of great service. Simple as these directions are, his flowers were amazingly fine, and the plants in the most robust health imaginable; and we are convinced that much of the imaginary difficulty of growing these plants in the south of England would vanish were his method followed.

VENTILATION.—Attention has been recently drawn to a new and simple process of ventilating public buildings by means of tubes, down which a partition is made to run from the top in the roof to the bottom in the interior. When these tubes are properly adjusted to the size of the building to be ventilated, and impure air accumulates in the interior, it is found that the impure air makes its escape by one division of the tube, while a proportionate supply of fresh air flows in by the other. Dr. Penny, we believe, was the first to suggest the applicability of this principle (called the double current) to the purposes of ventilation; but the credit of applying

it successfully to public and private buildings is due to Mr. C. Watson, of Halifax, who has not only brought it before the public, but invented the contrivance by which the descending air is broken inside, while outside the ventilators are sufficiently protected against any injurious effects of the weather. With a view to test its efficiency, it was lately subjected to trial on a small scale. A large room was closed for some time, and the company allowed to feel the progressive deterioration of the air. The valves were then opened, and immediately the tubes commenced their respective operations—the rarified air ascending by the one side, and the external atmosphere descending by the other side of each of the four tubes. No draught was perceptible upwards or downwards; and so gentle and perfect was the operation the law of Nature brought into action, that, ere long, it was matter of every one's experience that a very favourable and refreshing change had taken place. This contrivance is undoubtedly true in principle. In a former volume of this journal we made some remarks on this subject, with reference to producing a current or circulation in the trenches in which hot-water pipes are sometimes laid under the floors of conservatories or greenhouses. Possibly the same principle, if applied to smoky chimneys, would also be a remedy for this domestic trial.

COLOURS OF FLOWERS.—Mr. Van Buren, in the *American Horticulturist* (vi., 575), notices, in respect to blue flowers:—1. That a large majority of our native plants, bearing blue flowers, bloom either early in spring or late in autumn, and he inquires,—Do blue flowers require and consume more oxygen than those of other colours? The bruised petals or expressed juice of red flowers exposed to the atmosphere change to a blue colour: is this caused by absorption of oxygen? If so, may not plants consume a greater quantity at these seasons than when the air is in a more rarified state? Or does the intensity of the solar rays alone cause a redundancy of brighter coloured flowers in summer? 2. Wild blue-flowering plants are more frequently found in moist, shaded situations, than in more exposed sunny spots. The colour of many plants may be changed from pale red to blue, by employing “swamp mould,” and keeping them in the shade. Pursuing these hints, he suggests that the blue flowers might, by perseverance through several generations, be produced on many plants now producing flowers of other colours.

LESCHENAUTIA FORMOSA.—It is not a difficult plant to grow; if you reduce the quantity of loam employed in your compost, and increase the sand, you will improve it. The peat should be *light and full of fibre*; sufficient sand should be added to make the whole mass when well mixed of a grayish colour. The plants at this season should never be allowed to *become dry*; water should be given every day, enough to moisten the earth thoroughly. Let it have a free drainage and good air.

LAGESTREMA INDICA.—This is one of the loveliest stove-plants when properly treated. There is a neat bushy one in profuse bloom in the Royal Gardens of Kew. It is about two feet and-a-half high, and as much across; and its numerous, large, terminal heads of curled blossoms, of a beautiful rose-colour, have a charming appearance. The plant is easy of culture, readily kept at any desired size by cutting back the shoots after blooming. It requires a winter's rest, in a dryish state, and then repotting early in spring; then it will bloom freely. It ought to be in every hothouse, vinery, &c.

TREE CARNATIONS.—We well remember in our early days being gratified by obtaining a plant of the crimson-flowered Tree Carnation. This kind was then common in the greenhouses in Yorkshire. Now, however, we have in this country many other kinds, all of which are very handsome, and highly fragrant like the Clove. The following are offered to the public at a moderate price:—Atila, scarlet flake. Cassandra, rose. Gertrude, lavender, mottled with white. Incomparable, deep rose, striped with crimson. Jupiter, crimson. La Sermi, bluish-white, mottled with rose. Vestatie, scarlet. Le Zephir, purple. Madonna, mottled rose and crimson. Nonpareil, bluish-white. Prosperine, large crimson. The Baron, white, mottled with rose on the edge. Titus, dark crimson. Tom Ponce, bluish, striped with rose. Union, white, striped with crimson.

This charming class of Carnations blooms in-doors both summer and winter, and are beautiful ornaments.

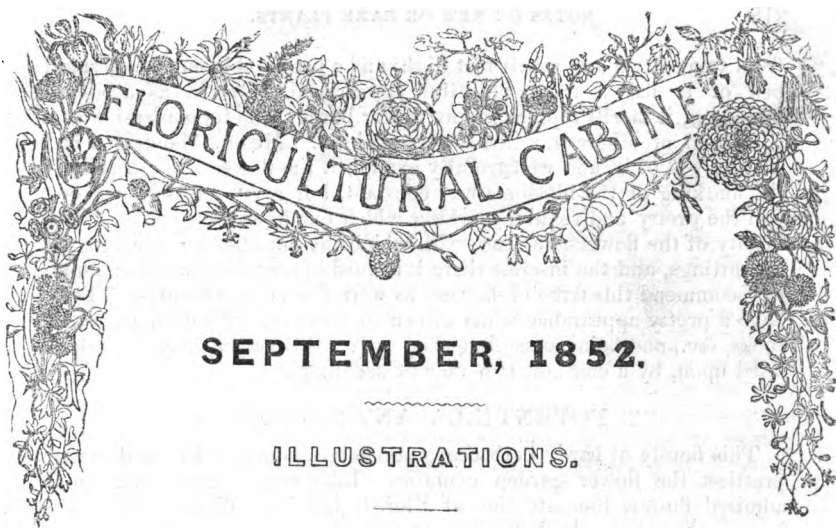
SELF-COLOURED AND CLOVE-SCENTED CARNATIONS.—Abbess of St. Clair, bluish. Fireball, scarlet. Negro, dark purple. Parsee Bride, deep yellow. Purity, white. Queen of Denmark, rich red. Magnificans, rich crimson. These, too, merit cultivation.

UNIV. OF
CALIFORNIA

TO THE
MUSEUM
OF THE
ACADEMY



1. *Antirrhinum Hendersonii*.
2. *Potentilla Antwerpensis*.



1. ANTIRRHINUM MAJUS, VARIETY HENDERSONII.

" This beauteous family to cares unknown,
Were born for pleasure and delight alone,
Gay without toil, and lovely without art,
They spring to cheer the sense and glad the heart."

THE flower is peculiarly formed, singular, and interesting. It has been made the emblem of *presumption*, from the front view of the blossom resembling the face of an animal, and it has from hence received various names, as Lion's Snap, Dog's-mouth, Cat's-eye, Calf-snout. When the sides of a blossom is pressed it opens like a mouth, the *Stigma* appearing to resemble the tongue; on removing the pressure the lips of the flower snap together, and hence it has been named Snap-Dragon.

The *A. majus* (the greater) is a native of the South of Europe, growing naturally in the fields, plains, &c. It is frequent on the cliffs of Dover, and is now claimed by many as one of the native plants of England.

This species of *Antirrhinum* is very much cultivated in Russia, for the purpose of obtaining seed, which by expression produces an oil that is nearly equal in excellence to that obtained from olives.

In our own country, however, these handsome flowering plants have long been charming ornaments in gardens and pleasure-grounds; in order to obtain improved kinds, considerable attention has been paid within the last dozen years, in raising seedlings, selecting seed from the best formed, and annually we are favoured with some improved varieties, both in form and colouring; descriptive lists of sixty-five superb sorts have been sent us. The very beautiful, distinct variety we now figure, has been obtained by Messrs. Henderson and Son, of Wellington Nursery, St. John's Wood, who sent it out last Spring. The plant is of a compact (not crowded, but open) neat habit, growing

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from two to two and a half feet high, and a profuse bloomer. A small bed of it has a most beautiful appearance. Grown as a single specimen, it merits a place in any flower border, and its contrast with a collection of others in a bed is very striking. Messrs. Henderson had a large bed of it, and we carefully examined the flowers, to ascertain if the marking of the blossoms was constant, but every blossom we saw had the pretty and regular marking which our figure represents. The beauty of the flowers, the ease with which the varieties are perpetuated by cuttings, and the interest there is in raising seedlings, alike combine to recommend this tribe of flowers as well deserving attention. They have a pretty appearance when grown on the ruins of buildings, walls, rocks, &c., and being once furnished their continuance may be calculated upon, by a constant new race of seedlings.

2. POTENTILLA ANTWERPENSIS.

This family of hardy herbaceous perennials, is one of the neatest and prettiest the flower garden contains. Like every other ornamental admired flower, the attention of Florists has been directed to obtain improved varieties by hybridising, and within a few years our friend Mr. Plant, of Cheadle, has taken the lead with this lovely genus. Others have followed with success, and we now possess a number of most strikingly beautiful kinds, which merit a place in every flower-garden. Their neat form of growth, profuse blooming, and the long period (from April to November) of their flowering, with the beauty and brilliancy of the flowers of nearly every one, alike contribute to render these plants truly valuable.

The *Potentilla Antwerpensis*, now figured, was obtained from Belgium. It is of dwarfish habit, and a free bloomer. Its *semi-double*, brilliant orange-coloured flowers, are exceedingly ornamental. It ought to be in every flower-garden.

“All are for health, or food, or pleasure given,
And speak in various ways the bounteous hand of Heaven.”

NOTES ON NEW OR RARE PLANTS.

ABELIA UNIFLORA.—A neat greenhouse shrub, plants a foot high, blooming freely. Each flower is bell-shaped, an inch and a half long, white, tinged with blue.

ALYSSUM MARITIMUM VARIEGATUM.—The variegated foliage is nearly white, as is the flowers, and covering a bed about eight inches high. There had been a number of Enfield's Scarlet Verbena also planted, and now the heads of the Verbena blossoms appear just on the surface of the Alyssum, and produce a most striking appearance; exceedingly handsome.

AZALEA AMENA. The dwarf crimson Chinese Azalea.—This is a *hardy* dwarf evergreen bush, which in habit very much resembles the well known *Rhododendron ferrugineum*. The leaves are about the

size of the common Box, hairy. The flowers are almost bell-shaped, five-lobed, and have that form of double, which is usually termed "hose in hose." They are of a rich crimson, each blossom an inch and a half across, and being produced in profusion, renders this neat dwarf shrub highly ornamental. It succeeds well too in the greenhouse, or pit-frame. It appears Mr. Fortune sent it from China, to Messrs. Standish and Noble, of Bagshot, where it has recently flowered in the open ground. Mr. Fortune stated, "This pretty Azalea was found in a Nursery near Shanghae, and had been brought from the far-famed city of Soo-chow-foo. Further than this its origin is not known. It is no doubt a very distinct species, and probably comes from a country *further north* than any of its race in China. We may now expect to have a race of Chinese Azaleas flourishing and blooming in our open borders in England. It is likely to prove a valuable plant for bouquets, and decorative purposes, particularly so when forwarded in Spring, similar to the general class of Indian Azaleas. (Figured in *Paxton's Flower Garden*, Plate 89.)

BORONIA BUTOSMA. RUE-SCENTED. (Synonyme, *B. spathulata*.)—It forms a dense bush, branching freely. The flowers are borne in profusion, in terminal cymous heads, of a pretty pink, becoming a deep rose. Very neat and handsome.

BOUVARDIA LEIANTHA.—This species grows more *tree-like* than the *B. triphylla splendens*, &c. The flowers are produced in terminal heads, of a rich deep scarlet. The *B. flava* is of similar tree-like habit, and blooms profusely. Its fine heads of *yellow blossoms*, contrast prettily with the others.

CAMPANULA LAMII.—A hardy perennial, which blooms in profusion. The flower-stem rises two to three feet high, branching freely, and every one adorned with pretty bell-shaped white flowers. Each blossom an inch and a half long, and an inch across. Well worth a place in every flower-bed.

C. VINCEFLORA.—A hardy herbaceous perennial. The flower-stems rising about fifteen inches high. Each blossom has a short tube, which is yellow inside, the other part of the flower is blue. Each flower is pendant, three parts of an inch across. The plant is a free bloomer, and merits a place in every flower-garden.

CEANOTHUS RIGIDUS.—The Horticultural Society introduced this pretty shrub into England. It was found by Mr. Hartweg, at Monterey, in California. The shrub is far more stiff and branching even than the common sloe-bush. It is an evergreen, with small foliage, of a glossy-green. The flowers are produced in profusion, and in what may be termed long terminal spikes, of a rich purple-blue, which render the plant very ornamental. It proves quite hardy in the Royal Gardens of Kew. It merits a place in every shrubbery. (Figured in *Bot. Mag.*, 4664.)

CHIRONIA FRUTESCENS.—An old greenhouse shrubby plant, erect, one to two feet. It blooms very freely. Each blossom is two inches across, of a bright pink, very pretty, and blooms throughout summer.

CHOROZEMA NERVOSUM.—Messrs. Henderson, of Pine Apple Nursery, Edgware Road, obtained this pretty species from the Swan River Colony, Australia. It is an erect growing shrub, similar in appearance to *C. cordatum*. It blooms freely, and the flowers are produced in long terminal spikes, formed of shortish racemes of blossoms. Each blossom is of a rich coppery-orange, with crimson wings and keel. Very pretty. (Figured in *Magazine of Botany*.)

COREOPSIS AURICULATA.—A hardy perennial, two to three feet high, blooming in profusion. Each flower is three inches across, of a bright yellow, very showy, and blooming all summer.

DENDROBIUM TRANSPARENS.—A native of Nepal. The flower stalks are about a foot long, jointed, and the blossoms arise at those joints, usually two at each. A separate flower is two inches across. The ground colour white, with the sepals and petals tinged towards the tips with rose. The lip is of a creamy-white, with a large deep blood coloured blotch edged in stripes.

FUCHSIAS.—The following new varieties we have just seen at Messrs. Henderson's Wellington Nursery. They are very handsome, and great improvements in the sections they belong to.

F. HENDERSONII.—Tube and sepals of a deep crimson, the tube half an inch long, sepals spread, and the flowers two inches across. The corolla is a *full* semi-double, of a rich *violet-purple*, and each petal has a crimson stripe down the middle. It is a free bloomer, of great beauty.

F. SPLENDIDISSIMA.—Tube of medium size, that and the long *well-reflexed* sepals are crimson. The corolla is exposed to full view, an inch and a half long, of a rich violet-purple. The large flowers on long slender foot-stalks, seen at a distance, appear like very large beautiful *flies* on the wing. We are obliged to omit others till our next number.

HELIOTROPIUM VOLTAIRIANUM NANUM.—This dwarf variety grows about eight inches high, branching freely. The flowers are blue, in larger heads than the older variety. Very good bedding plant.

IMPATIENS MACROPHYLLA. The large-leaved Ceylon Balsam.—Plants have bloomed in a moist, but not very hot stove, in the Royal Gardens at Kew. It grows from two to three feet high, the leaves being six inches long, (but native specimens a foot long,) oval shaped, dark green, with a bright red leaf-stalk. Flowers small, an inch across, of a *deep-orange* stained with red. If some of our common stove Balsams were impregnated with these orange-coloured ones, improved varieties of those much admired flowers would no doubt be obtained. (Figured in *Bot. Mag.*, 4662.)

LEPTOSIPHON.—Messrs. Veitch have obtained from California a new species, the flowers are sulphur coloured, each petal orange at the middle, with a red spot at the base. It is a pretty acquisition to this lovely genus.

LILIUM WALLICHIANUM.—A year ago we remarked on this very noble Lily. We recently saw a plant in bloom at the Wellington

Nursery, and although it had occupied but a small *three-inch* pot the last Spring, the flower when fully open, is seven inches across the mouth, and eight long. In their early stage, the flowers are of a pale yellow, but when they expand a pure white, and of thick substance. They merit a place in every greenhouse. No doubt, larger bulbs will produce proportionably larger flowers; "how magnificent!" And most probably they will succeed out-doors in summer.

LOBELIA OCULATA.—This is one of the dwarf, or prostrate section, a most profuse bloomer. The flowers are of an intense deep blue, with a clear white eye. Each blossom spreads out a broad flat surface, which exposes it to full view, and renders it more showy.

LYTHRUM ROSEUM SUPERBUM.—A hardy perennial. The *numerous* flowering spikes grow from two to three feet high, and the blossoms are of a beautiful bright rose. It is remarkably showy.

NYPHÆA DEVONIENSIS.—Dr. Lindley announced in the Gardener's Chronicle of July 10th, "At this moment there is actually flowering at Chatsworth, an hybrid produced by crossing *Nymphæa rubra*, with *N. Lotus*." Seeds were obtained in the Autumn of 1850, and in April, 1851, a most beautiful hybrid blossomed, which has been named *N. Devoniensis*. A fine figure of this noble flower is given in the August number of the Botanical Magazine, where Sir W. J. Hooker observes, "For the opportunity of figuring this truly splendid plant, we are indebted to Mrs. Spode, the lady of Joshua Spode, Esq., of Armitage Park, Rugely, Staffordshire, in whose celebrated gardens the *Nymphæas*, and *Victoria Regia*, &c., are grown in great perfection, and where the *N. Devoniensis* has bloomed in much splendour." It is a very free bloomer, and continues to flower from Spring to Winter. Each flower is eight inches, or more, across, of a brilliant rosy-red colour. A fine plant of it has also bloomed profusely in the tropical aquarium in the gardens of Sir W. Molesworth, Bart., Pencarrow, Cornwall. It is there planted in rough turf, laid in a heap before using, with one-sixth of dried cow's-dung added. The water kept from 75 to 85 degrees.

ODONTOGLOSSUM PESCATOREI.—A stove orchid from New Grenada. The flowers are borne in large panicles nearly a yard long. Each blossom is about three inches across, sepals and petals broadish oblong, transparent white, with a blush line up the middle of the sepals. Lip white, with a stain of yellow near the base. The column is white, with ragged crimson wings. It is a beautiful flowering species. (Figured in *Paxton's Flower Garden*, Plate 90.)

PAULOWNIA IMPERIALIS.—This noble plant has bloomed very fine this season, in the grounds of the Bishop of Exeter, at Bishopstowe, near Torquay, in Devonshire. Large panicles of its flowers were sent to Sir W. J. Hooker; the one represented in the Botanical Magazine for August, has twelve blossoms. Each flower, tube-shaped, is as large as a fine common Fox-glove blossom, of a pale violet-purple colour. They have a violet fragrance. In its native country, it forms a tree thirty to forty feet high. Its very large heart-shaped leaves have

a noble appearance, and even did it not blossom in this country, render it deserving a place in any suitable situation, in the pleasure-ground.

PELARGONIUM WHITE-UNIQUE.—The flowers are tinged with rose; neither the blossoms or foliage are in form like the purple or lilac kinds, and compared with them, it is utterly worthless; for a light coloured bedding one, there are many grown much superior to it. We lately saw, at Messrs. Henderson's, Wellington Nursery, a plant of the Purple-Unique, growing upon the ridge of a piece of rock-work, blooming freely, and it had one branch which produced only flowers of a *lilac colour*. We were informed that the lilac-flowered, which was sent out last year, was obtained from a similar sportive shoot, which was cut off, and cuttings struck from it; having continued the following season to produce only lilac coloured flowers, it was then sent out as a new seedling by a florist in Surrey. Being permanent in colour hitherto, it is an acquisition.

P. DIADEMATUS BIJOU.—The flowers are of a bright rose, with a dark spot on upper petals. The flower having a white centre. It blooms freely, and is a valuable bedding variety.

P. DIADEMATUS PULCHERRIMUM.—A bright cherry-rose, upper petals a dark spot. Centre of flower white, free bloomer, fine bedding variety.

P. DIADEMATUS SPLENDIDUM.—Bright rosy crimson, edged with lilac, with the *upper* and *lower* petals almost covered with a dark velvet blotch. Each flower has a small white centre. It is a very singularly marked flower, good size, and the plant a free bloomer. A valuable bedding variety.

The above varieties of *P. diadematum*, have large flowers, the size of *D. rubescens*, or *D. Sidonium*, and admirable additions for bedding.

P. HENDERSONII.—This is the new *white-flowered* horse-shoe Geranium, which Messrs. E. Henderson and Son, of Wellington Nursery, purchased the stock of. The plant is of medium habit, blooms freely, and contrasts very prettily with the scarlets. The blossoms are not equal in form to the best scarlets, but the petals are what may be termed of middle breadth. It is well worth having, and a bed planted closely would be a charming contrast with others.

P. LILIPUTIAN.—This is a *dwarf variety* of the scarlets (*Geraniums*). It branches freely, and grows from nine inches to a foot high. It is a profuse bloomer, and the flowers a rich scarlet. One of the prettiest and most interesting, and deserves a place in every flower-garden. It is valuable too for a vase, or box for a window, &c.

Beds of the following plants were in fine bloom.

P. PUNCH.—The flowers are fine-shaped, very large, a brilliant scarlet, and is not excelled by any other.

P. PURPLE-UNIQUE.—Beautiful at all times.

P. LILAC-UNIQUE.—A charming companion to the former.

P. LUCIDUM.—The leaves are a *shining green*, the flowers a *rich red*, and in profuse bloom, very pretty, and of dwarf habit.

P. DIADEMATUS RUBESCENS.—This is a charming bedding variety, its *rosy-crimson* flowers are very showy. The *Diadematum* is a rosy-lilac, not near so pretty as the variety last described.

P. LADY FLORA HASTINGS.—This is one of the *Fancy Class*. Its large white flowers with clouded upper petals, renders it showy. It blooms freely. If the bed does not contain sufficient plants, it has a naked appearance. Always put into a bed as many plants as will soon cover the surface, better have it crowded than thin and unsightly.

P. FROGMORE SCARLET.—Very rich colour.

P. TOM THUMB.—Scarlet; excellent.

P. PINK IVY-LEAVED.—This is a free bloomer, the heads rising from six to nine inches, the flowers of a rosy-pink, very pretty.

P. CERISE-UNIQUE.—The foliage is prettily marked, and the flowers large, of a bright cherry-colour. Very pretty.

P. COMMANDER-IN-CHIEF.—Foliage very prettily marked with green, yellow, and brown. Flowers large, a rich scarlet. Handsome.

P. WHITE-FLOWERED IVY-LEAVED.—This blooms freely if not in too rich a soil. It contrasts very nicely with the *pink variety*.

P. MANGLES'S SILVER VARIEGATED.—Free bloomer, flowers rosy-red. Along with it is the purple Verbena; these two produce a *pretty appearance*, but a few lilac-coloured Geraniums had also been planted and spoiled the effect.

P. QUEEN OF SUMMER.—The leaves are pretty, the flowers large, a rich scarlet, and in profuse bloom. The early heads of flowers were out of bloom, and had a profusion of immature seeds, these spoiled the appearance of the bed. As the plants are so easily increased, the heads of seeds should have been cut away.

P. JUDY.—A free bloomer, flowers good size, and of a rosy-red colour, very pretty contrast.

P. STEWART'S IVY-LEAVED.—The flowers of a blush-lilac, a nice variety of dwarf habit.

P. VARIEGATUM.—This is one of the white variegated, with scarlet flowers, blooms very freely, and showy.

P. STATIASKII.—This is a fancy, with dark maroon upon a lighter ground, blooms in profusion, and very showy.

The following kinds, too, were growing in mixed beds, in the Royal Gardens of Kew, and prove to be excellent for bedding.

P. HARKAWAY.—A compact bushy plant, grows a foot high, and blooms very freely, the flowers of a rich scarlet, excellent bedder.

P. DIADEMATA SIDONIUM.—Flowers large, bright rose upon a light ground, and centre white. Each petal has a deeper coloured blotch at its middle. It blooms freely, and one of the best for a bed.

P. ANNETTE.—This is one of the fragrant, crumpled-leaved kinds, grows compact, about nine to twelve inches high, blooms freely; flowers white, with a red spot on the upper petals. Last year there was a bed of it, but being difficult to increase, only a few plants remain, we have applied to various nurseries for it, but in vain.

P. YEATMANNIANA GRANDIFLORA.—Flowers large, light ground, with the upper petals having a dark blotch, edged with carmine, and a lighter margin. The lower petals have a broad crimson band across the middle. It blooms very freely, and a handsome bedder; a foot high.

P. PRINCESS ROYAL (Conway's).—The leaves have a very striking horse-shoe marking. Plant dwarf, about a foot high, blooming pro-

fusely. Flowers a bright scarlet. Handsome bedder. The above are excellent for beds, we have notes of others which we shall give in future.

P. CAPTAIN DARLY.—An abundant bloomer, flowers large, of a pretty salmon-colour, leaves horse-shoe marked. Contrasts well with the scarlets.

P. SHRUBLAND PET.—Much was said by some persons of the excellence of this variety. We have seen it growing in the open ground, but on an average not above one truss of flowers to each plant, and from four to six very small narrow petalled blossoms of a dull crimson-red. We are informed that it has been in some of the nurseries around London, for six or seven years, and a few days back, we had fine plants offered us at sixpence each. When grown in a pot, it has a much less proportion of foliage, and blooms more freely, but is worthless, so far as has come under our notice.

SAPONARIA OFFICINALIS PLENO PURPUREA.—A hardy perennial, a very free bloomer, and its large double rosy-purple flowers are very showy. It will contrast well with the flesh-coloured species. Each blossom is two inches across.

STYLIDIUM AMÆNUM.—Messrs. Henderson's, of Pine Apple Nursery, obtained this very pretty species from the Swan River colony. It is an herbaceous, greenhouse perennial. The flower stem rises about six inches high, terminating in a pyramidal shaped raceme, of numerous flowers. Each blossom is about three parts of an inch across, of a pretty rose colour.

TRITOMA ROOPERII.—This beautiful species has been sent from Kaffraria, to the Rev. T. Rooper, of Brighton, in whose garden it has bloomed in the open air. It is a perennial. The flower-scape is a foot high, terminating in a longish-crown of numerous blossoms, each flower being about two inches long, of a bright flame-colour, or orange-red on the upper side, yellow beneath. It is a handsome blooming plant, and merits a place in every flower-garden. (Figured in *Magazine of Botany*.)

TECOMA JASMINOIDES.—A fine climbing plant in the greenhouse, in profuse bloom. Each blossom three inches across, pure white, with a crimson centred tube, very handsome.

VERONICA CORONATUM.—A hardy perennial, blooming in profusion. The principal flower-stems rise to two feet high, and terminate in a large number of shortish spikes, forming a *broad head* of rich blue flowers, very pretty.

IN THE ROYAL GARDENS OF KEW.

AGAPANTHUS UMBELLATUS.—One pot of this fine flowering plant, had ten heads of flowers, and each head had from eighty to ninety blossoms. Each of the flower-stems was four feet high, and bearing a vast number of fine blue flowers, they had a very pretty appearance.

A. UMBELLATUS PALLIDUS. This plant was equal in vigour to the previously described one. There was only one head of blossoms, but it

contained one hundred and three flowers. The flower-stalk four feet high. The flowers of a bluish-white, and contrasted prettily with the deep blue of the others. We never before saw these plants grown to such perfection. They are potted in a strong yellow loam.

DIETES BICOLOR.—It is one of the Iris order of plants, the flowers somewhat like the Peacock Iris, sulphur and orange, with a black spot near the bottom of the petals; each blossom three inches across. A very pretty greenhouse plant.

BALSAMINA LATIFOLIA ALBA.—Flowers pure white, nearly two inches across, a pretty contrast with the *B. latifolia*, blooming freely in the greenhouse.

BEGONIA MARTINIANA.—The large bright-pink flowers, with their centre of golden anthers, are exceedingly beautiful. The plant grows about two to two and a half feet high, branching freely, and blooming profusely. It continues to flower from June to the end of the year, and merits a place in every greenhouse.

OXALIS ELEGANS. These free blooming plants are very beautiful. The lovely lilac-coloured flowers with a velvet centre, are deservedly admired by all persons. It does well either in the greenhouse, or turned out in the open grounds, growing from six to twelve inches high.

CAMPANULA VIDALLII.—A plant having three branches of flowers, ten blossoms on each, was very interestingly pretty. The plant was bushy a foot high, and had a number of branches, three only had pushed forth into flowering ones. The blossoms are of a pure waxy white, an inch and a half to two inches long, produced on rather long foot stalks, in a pendant manner, and have a charming effect. It does well in the greenhouse or open flower-bed, and ought to be in every one.

FUCHSIA SPLENDIDA.—The flower is but of medium size, tube and sepals of a shining bright red, reflexing much, and fully showing the bright blue corolla. A free bloomer.

F. GLOBOSA MAGNIFICA.—This is very far the finest of the *globe-shaped*. Its rich crimson tube and sepals, and the large dark corolla, render it exceedingly beautiful. It ought to be one of every collection.

F. PRINCE ARTHUR (Nicoll's).—We never saw this fine variety grown so large as here, some of the flowers being four inches long; tube pure white, corolla a bright rosy crimson. All Fuchsia growers should have one of this variety.

F. CLAPTON HERO.—The flowers are *very large*, reflexing well, and fully exposing the large dark violet-coloured corolla. The tube and sepals of a bright shining crimson. It is a noble grower, and abundant bloomer. It merits a place in every collection.

F. VOLTIGEUR.—The flower reflexes well, fully exposing the corolla. Tube bright crimson, corolla bright violet-blue. Flower of medium size, exceedingly pretty, and produced in abundance. Should be in every collection.

F. INACCESSIBLE.—Tube and sepals bright red, corolla deep violet-blue. It is what may be termed, a *long-globe*, exceedingly pretty, of good size, and produced in profusion.

F. DON GIOVANNI.—Flower very large, tube and sepals crimson, corolla purple-violet. A noble variety.

F. GENERAL CHANGARNIER.—The flowers are immensely large, of a deep orange-blush, tipped with green. Corolla a deeper colour. A noble variety, and free bloomer.

F. PAGODA.—The tube and sepals bright red, corolla blue, changing to a dark purple. The flowers are nearly four inches long, and well reflexed, very pretty.

F. SEDONIA.—Flower of medium size. Tube and sepals blush-white, tipped with green, corolla violet-purple. Very distinct and pretty.

The above are the best varieties we have seen. The Bride, Lady Dartmouth, Fair Rosamond, all light flowers, are also very fine.

CLEMATIS TUBULOSA.—A hardy shrubby species. The flowers are *bell-shaped*, drooping, white, each blossom being an inch and a half across. It is exceedingly neat and pretty.

C. CAMPANIFLORA.—White, of similar form to the above, but about half the size.

THE ZICHYA INOPHYLLA.

BY MR. J. R. SANTON, SIDCUP GREEN, KENT.

THIS beautiful greenhouse plant, which is really one of the handsomest of the Leguminous (pea-formed) plants, like all others, if not submitted to a regular mode of training, will become one confused mass of shoots, which if allowed for a short time only to become entangled, are difficult to restore to order without injury to the plant. Scarcely anything connected with gardening looks worse than to see *climbing-plants* neglected of proper training, or having the shoots tied together like a broom; for whatever may be the natural habit of a plant, in regulating its branches we should imitate nature as nearly as possible, unless it is desirable to train them into any artificial form. My method of training this useful plant, is with four or five leading shoots; one from the centre of the pot, to which a long neat stick is placed, the others being fastened to similar sticks at regular distances round the pot; from each of these leading shoots proceed numerous side branches, which are densely covered with a fine head of scarlet flowers. When the plant has done blooming, which is by the end of May, or beginning of June, I still allow it to remain in the greenhouse until the shoots are *well ripened*, and during this period the plant is watered *sparingly*, for it is only by moderating the supply of water that we can imitate those periodical seasons of rest which this, as well as all other exotic plants, receive in its native climate. By the first week in August it is taken from the greenhouse, and well soaked with water, then placed in the open air in a sheltered situation, but fully exposed to the sun, and having the pot inserted in another pot two sizes larger, to prevent the sun's rays from destroying the young fibrous roots, which are the principal feeding organs. The whole of the *side shoots* are pruned back to where new shoots are formed, and the *leading shoots* cut back according to their strength. As soon as the new shoots are from one to two inches long, the plant is taken from the pot and some of the soil is shaken from its roots, the stronger roots are at the same time cut back to the young

fibres, it is then repotted in a new or clean-washed pot, WELL DRAINED, for there is no other plant that I am acquainted with, that suffers more from imperfect drainage than this. The soil in which it thrives admirably, is chopped turfy peat, and an equal portion of good rich turfy loam, well mixed, adding at the same time a little sharp silver-sand. In potting, take care to press the soil firmly, and frequently adding some broken bits of charcoal and bones, to keep it porous. After potting, place it in a shady situation for a short time, and by degrees, let it be fully exposed to the sun. It must be taken into the greenhouse by the end of September, or beginning of October. *Zichya inophylla* being treated in this manner, will amply compensate for the trouble. The leading shoots only are secured, the side ones become pendant, and the plant has a graceful and pleasing appearance. One, or more plants of it, ought to be in every greenhouse. It may be purchased at a cheap price, and is easily cultivated, blooming very freely from March to June, and is a fine Spring ornament.

WINTER AND SPRING BLOOMING OF THE LILY OF THE VALLEY.

BY A LONDON PRACTITIONER.

No doubt, many of the readers of this Magazine, have seen these lovely sweet flowers in large quantities in the flower establishments in Covent Garden Market, during the months from January to May. By the following mode of treatment, I bloom them during the period above named, and as it may be of service to persons in the country, who cannot avail themselves of the Covent Garden supplies, I forward the particulars for the Magazine.

To have flowers by the beginning of January, the latter end of November is the time to take up the roots. Those selected must not be less than two years old, and in appearance, are something similar to small heads of asparagus, when about two or three inches high, and are furnished with fibrous roots; each of these tubers are wrapped round with a little moss, and placed in pots or mignonette boxes, close together. The boxes or pots are previously filled with old bark or light earth, a thin portion is laid over the crowns, and then a layer of moss, which keeps the roots moist, assists in drawing up the flower stems. The boxes or pots are then placed on a fire-flue, or any other warm situation. Over these are turned boxes or pots of the same dimensions, upside down, to keep the plants quite dark; in three or four weeks, according to the warmth of the situation, they are abundantly furnished with their lovely bell-shaped flowers, six or eight inches high. Those coming into flower first, are taken out of this situation, being easily removed by having moss round the roots, and placed in small wicker baskets, or an ornamental vase, with Hyacinths, Van Thol tulips, &c., which are forced, something similar, for this purpose. When this sort of winter flower-basket, pyramid, or vase, is properly executed, the

colours of the flowers regularly mixed, and the spaces betwixt the plants filled up with ornamental moss, it certainly has a very neat and pleasing appearance.

Where a succession is required, the roots are kept in a shady place, or in the border in the garden, covered a foot or eighteen inches with fresh stable litter, so as to be easily come at in frosty weather, as occasion may require. When finished flowering, they are planted in the garden at the latter end of March, and form a plantation for forcing purposes in two or three years.

THE PLEASURE-GROUND.

BY A LANDSCAPE GARDENER.

HAVING recently become a subscriber to your Magazine, and derived pleasure and profit from reading its Numbers, I forward you a few observations on the Pleasure-ground for insertion, hoping the readers will derive some satisfaction in perusing them.

The valuable appendage to a home of a pleasure-garden seems to own its creation to the idea that our sublime poet formed of Eden. It originated in England, and is as peculiar to the British nation as landscape planting. Whilst other arts have been derived from ancient, or borrowed from modern inventions, this has indisputably sprung from the genius of our soil, and is, perhaps, one of the most delightful, as well as most beneficial of all that claim the name of elegant.

Ornamental plantations are now so universally spread over the face of this country, that our island may be compared to a vase emerging from the ocean, into which the Sylvens of every region have set their favourite plants, and the Flora of every climate poured her choicest gifts, for the embellishment of the spot round which Neptune throws his fostering arms. My desire leads me to hope that I may add pleasure to the pleasure-ground, by pointing out the beauties of some of those plants, which must render vegetation an object of admiration and veneration to all observers. I wish to attract attention to the peculiar pleasing properties of the plants by the remarks of the ingenious, the anecdotes of the ancients, the harmony of the poets, the observations of the physicians, and the reflection of some of the moralists of all ages, and to give this subject a smiling aspect.

The vegetable ornaments of the pleasure-ground, comprises trees, shrubs, and herbaceous plants.

Though ornamental trees and flowering shrubs, seem to contribute nothing to Pottage, and little to Medicine in its present refined state, yet they add greatly to our pleasure, and considerably to our health.

They win us to good humour by their fragrance and cheerful appearance, and produce a serenity of mind by the calm reflections they present to it; thus relieving some of the maladies of the soul, as drugs mitigate the grosser and more perceptible sufferings of the body. The Poet Cowper states,

“The spleen is seldom felt where Flora reigns,
 The low’ring eye, the petulance, the frown,
 And sudden sadness, that o’ershade, distort,
 And mar the face of beauty, when no cause
 For such immeasurable woe appears :
 These Flora banishes, and gives the fair
 Sweet smiles and bloom, less transient than her own.”

The allegorical allusions which the Eastern Nations are accustomed to make by means of flowers, and the fables of the ancient poets and mythologists respecting plants, are numerous. Thus pleasing ideas may be connected with pleasing objects, and agreeable images convey lively but moral sentiments to the mind, adding to the charms of the country without recourse to romance or useless fiction. These accustom the mind to such violent sensations, that at last it is obliged to resort to an excess of feeling, either of mirth or grief, to prevent that dreaded fashionable lethargy of spirit—*ennui*. Such a habit in the end injures health, and consequently shortens life, but a calm and cheerful mind assists in the prolongation and enjoyment of both :

“Come then ye blissful scenes, ye soft retreats,
 Where life flows pure, the heart more calmly beats.”

It would seem, that the more terrible a sight, and the more violent an impression, the more agreeable to the great portion of mankind, who run with avidity after objects of horror, whilst they pass unnoticed those which produce gentle and agreeable sensations, and would to all appearance rather tremble at the awful thunderbolt, than calmly admire the beauteous horn of plenty. It has been observed that the Volcano near Naples, attracts more travellers to the city, than the DELICIOUS GARDENS, which adorns the shores of that region. The plains of Greece, overspread with ruins, would entice many to undertake a voyage to a distant country, who would feel but little inclined to travel over their native soil to view its richly cultivated lawns ; and there is no doubt, but that formerly, where one person went to Egypt to be a witness of Nature’s bounty to that nation, five hundred became travellers to behold its Pyramids. A temple after its fall excites more eager curiosity than it did during its construction ; and many who will not cross their thresholds to look at a beautiful calm in Nature, will rush to get a sight of a storm and shipwreck in a playhouse. This love of the terrific is not, as has been asserted by foreigners, peculiar to the English nation : it is prevalent every where. I once observed an instance of it when in Paris. Wishing to visit the celebrated garden of M. Bourseau, then unequalled for the beauty of its plants by any city-garden in Europe, I received in answer to all enquiries for direction to the spot, the usual careless but short and decisive, *Je ne le connois pas, Monsieur* ; but on asking the way to *La Mort*, every turn and alley were readily pointed out with all the bustle and officiousness of French politeness.

In my remarks of flowering trees and shrubs, I have nothing terrible to present to the reader ; but to

"Shew Nature's form in smiling beauty drest,
And call mankind to view her and be blest."

It seems hardly possible for any mind to be so debased as to be insensible to the effects of Nature, whose *vegetable charms* become more endeared to us as our age and reflection increase. A more delightful cabinet of natural history can scarcely be formed, than the pleasure-ground affords, even when unadorned with exotic beauties. It offers matter for contemplation of the most agreeable kind, which varies still as seasons revolve; and as every tree and shrub has its peculiar inhabitants, we have at the same time a collection of animal and vegetable wonders, that are sufficient to occupy all the leisure which our economical duties allow us. As years increase, a taste for most pleasures in general diminishes. Those of the court become fatiguing; the charms of the table appear to lessen; and as passion subsides and love languishes, the gay ball and splendid opera lose their delights; but the fondness for a garden increases, and is almost the only *earthly pleasure* that does increase. Let us not, then, neglect to cultivate a taste for what will add to the delight and amusement of the latter period of life. Every tree we plant adds to the entertainment we prepare for future years, for ourselves, our friends and successors.

The introduction of a useful or an ornamental plant into our island, is justly considered as one of the most important services that a person can render his country; for it is impossible to calculate on the benefits that may be derived through his means, when the qualities of the vegetable are ascertained and its virtues known. Even what is introduced and planted merely from curiosity or ornament, seems to unite us to the nations from whence it comes. It bestows on us a share of the blessings of other climates, and affords us a portion of the smiles of a more genial sun. Whilst, therefore, remarking on the beauty of trees and shrubs, I wish to be understood as expressing gratitude to those who have enriched our land with additional charms, and more fully displayed Nature to our eyes, and not as disregarding the plants that are indigenous to our soil. I am aware that many an Englishman has sighed under the shade of the *banana*, for a sight of his *native banks*, where the primrose sparkles through the hazel-edge, and the violet peeps so modestly. The plants of our country recall the idea of it in the most forcible manner, wherever we meet them. They are often the first object that attract the attention of those who have been long absent from their native fields, and who on their return pour out the genuine effusions of joy on beholding the village-elm, the well known oak, or the unchanged yew, whose antiquity is equal to the church it shades. We are told of a young Indian Pontaveri, (from Otaheite,) who in the midst of the splendour of Paris, regretting the simple beauty of his native island, sprang forward at the unexpected sight of a *Banana tree* in the Jardin des Plantes, *embraced it*, while his eyes were bathed in tears, and exclaiming with a voice of joy, "Ah! tree of my country!" seemed, by a delightful illusion of sensibility, to imagine himself for a moment transported to the land which gave him birth.

There are with us, too, seasons when we seem as it were for an instant to go back to the delights of infancy, when, on each succeeding

spring, we behold the cowslips, which afforded us so many happy hours in childhood, as we formed balls of their blossoms. Then the playful girl, bedecked with wreaths and necklaces of daisies, led her little swain in chains formed of the milky flower-stalks of the dandelion ; but who at the sight of a butterfly burst the brittle bonds and scampered away, to return, perhaps, a few years after sighing in fetters not so visible but more binding.

There is no part of nature's works more interesting than flowers. They seem intended for the embellishment of the fair, and for the ornament of the spot where they tread. Their sweet perfumes have such influence over all our sensations, that in the midst of flowering trees, shrubs, &c., the most acute grief often gives way to sweetest melancholy. When our home and domestic companions are encompassed by the pleasure-garden, our situation approaches nearest to a *terrestrial* paradise. Is it not, then, as Cowper says,

“ Strange, there should be found,
Who, self-imprisoned in their proud saloons,
Renounce the odours of the open field,
For the unscented fictions of the loom ;
Who, satisfied only with penciled scenes,
Prefer, to the performance of a God,
Th’ inferior wonders of an artist’s hand ?
Lovely, indeed, the mimic works of art ;
But Nature’s works far lovelier.”

The pleasure-ground is, to a rational mind, a source of inexhaustible delight and instruction, where each season brings new joy, and every morning a fresh harvest of delightful sweets. Subjects for new thoughts and contemplations present themselves to our view, and even the most dreary months still supply cause of admiration, and discover a world full of wonders ; for,

“ E’en Winter oft has seen it gay,
With fretted frost-work spangled o’er,
While pendants drooped from every spray,
And crimson bodlets told, once more
That spring would all its charms restore.”

It is not to old age alone, that the garden offers its placid delights. Every stage of life, from the cradle to the grave, is attracted by its charms. The infant is ready to spring from its nurse’s arms, allured by the gay colours which flowers exhibit.

They form the most innocent toy of childhood, and the cultivation of them is generally its first labour, whilst their presentation often explains the passion of youth. The happy child loves to entwine them in her locks, and the fond parents delight to see their child mimic their beauties with the pencil ;

“ The flowers that grace their native beds,
Awhile put forth their blushing heads ;
But e’re the close of parting day,
They wither, shrink, and die away ;

But these, which mimic skill hath made,
 Nor scorched by suns, nor killed by shade,
 Shall blush with less unconstant hue,
 Which art at pleasure can renew."

(To be continued.)

A MOST SUCCESSFUL METHOD OF BLOOMING THE EPIPHYLLUMS.

BY A LONDON EXHIBITOR.

THE Cactus tribe of plants is a great favourite of mine, especially the Epiphyllums, and as the plants which I grow, bloom much more profusely, and have finer blossoms than any others I have seen, I transmit you a few brief particulars of the mode of treatment pursued.

The compost I use, consists of an equal quantity of light turfy loam, and pigeon's dung, and one-third sheep's dung, exposing the mixture one year to the influence of the summer's sun and winter's frost to mellow. When wanted for use, I add one-third of sandy peat, in both cases mixing them well together. I grow the young plants from February to July, in the forcing flower-house, kept from 55° to 60° Fahr. I afterwards remove them to a shelf in an airy situation in the greenhouse, exposed to the mid-day sun, giving them plenty of air and little water. The plants that I want to flower the following September, are placed in the forcing-house the first week in December, giving them very little water for the first ten days, and gradually increasing the water as the plants advance in growth. About the 1st of February I stop all the young shoots, which soon become well ripened; from this time I decrease the quantity of water until they become quite dry, in order to throw the plants into a state of rest. In the beginning of March, I replace them in a cold shady situation in the greenhouse, treating them as before. For plants to flower in August, I place a quantity more in the forcing-house the first week in January, treating them the same as those for September; only they are put to rest in the greenhouse a fortnight later, and replaced in the forcing-house one week sooner.—The first flowering plants are put in the forcing-house the end of January, and will come in flower about the middle of March. When these plants have done flowering, and are removed from the drawing-room, or greenhouse, I prune out most of the old shoots that have flowered, so that the plants are furnished regularly with young shoots for flowering the ensuing year; these plants are also placed in the forcing-house for ten days, to ripen the young wood and dry up the moisture, and are then put to rest in the greenhouse as usual: such plants will flower a second time in October. Others put in the forcing-house the middle of February will flower about the end of April; if then pruned, and dried, and put to rest as before, they will flower a second time in November, and so on in proportion. I report them at all seasons whenever the plants may require it, always observing to keep the pots well drained with potsherds, that the moisture may pass off readily. This process may be considered troublesome, but superior

growth, and abundance of flowers, amply repay the care bestowed. By the above treatment, *E. speciosus* and *Jenkinsoni* have generally produced from one hundred to a hundred and fifty fine expanded flowers, at one year old, plants about two years old of *E. speciosus* bore two hundred flowers, *E. speciosissimus* ninety-two, and *E. Jenkinsoni* one hundred and ninety-four. I prefer growing them in wooden tubs, with nice stakes fixed to the tub, to the usual mode of supporting them by sticks driven into the ball of the plant, which I consider injures the fibre, and makes the plant appear unsightly.

MISCELLANEOUS SECTION.

ROOTS AS A MEANS OF PROPAGATION.—As it is a fact, which botanists have clearly demonstrated, that all the organs of plants have an extremely simple origin, and are formed, as it may be said, by a single utricle, which engenders others, among which vessels of different kinds appear; that this mass of utricles proceeds in this manner to constitute, under the vital influence, plants of various forms, adapted for our use, and for increasing our enjoyment; since it is the case, I repeat, that all plants originate by a simple and uniform organisation, and that many of them are naturally multiplied by division (segmentation) we may thence conclude that every detached part of a plant, placed under conditions favourable for its preservation, would reproduce an individual similar to that from which it was taken. Practical experience daily furnishes us with numerous examples in support of this view of the subject.

What does, in fact, the gardener when he cuts off a branch from some plant in order to make it produce roots? Is not the complete separation of the small portion of the plant made with the intention of its becoming an individual similar to that from which it was taken? Do not cuttings and buds afford daily confirmation of these data of vegetable physiology? Is it not the case, that in some plants, Gloxinias and Achimenes, for example, a leaf, or the fragment of a leaf is sufficient to propagate the species? Moreover, is it not known that in some of the Lily tribe even a single scale detached from the bulb will produce minute bulbs or shoots from its base; and, finally, one of the scales in some cases may be cut into small pieces, by means of which, the gardener can produce several plants.

These examples, which might be easily multiplied, are, I presume, sufficient for the subject I have proposed; and they lead to the conclusion, that, if the above-ground portions of a plant can produce new individuals, so ought likewise the under-ground parts or roots, seeing that they have the same elementary formation. I am convinced that this part of the plant has hitherto been too much neglected as regards propagation, and that in this respect it will become of great importance, when it shall be advantageously employed in the propagation of plants that are found difficult to increase by other modes. It may be employed for producing plants either directly similar to the original, or for furnishing stocks. In the first case, it is sufficient to cut the roots into small pieces and plant them in the natural soil, as is usually done with the Catalpa, Tecoma, Paulownia, Xanthoxylum, Cydonia, Azalea,

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Maclura, *Gingko*, *Calycanthus*, *Syringa*, *Prunus*, *Morus*, *Guilandina*, *Volkameria*, *Ailanthus*, *Rhus*, &c.; and in the second, that is, when we wish to raise stock, we must proceed as is done for the *Pæonia*, *Clematis*, *Bignonia*, &c.

The examples which I have cited may be extended to herbaceous plants, such as the *Lobelia* and certain *Anemones*. The *Pæonia officinalis*, &c., make equally good plants from pieces of the roots, and in my opinion this is the best mode of propagation for these plants. Indeed, certain families, such as the *Campanulacæ*, *Boraginacæ*, *Convolvulacæ*, and the *Ranunculacæ*, &c., seem to possess this property in a high degree.

In endeavouring to direct the attention of gardeners to the roots as a means of propagating plants, I have the conviction that the certainty of the proceeding will be very advantageous in the propagation of certain plants which refuse to strike from cuttings taken from shoots or branches. If we have great difficulty in so propagating them, it is frequently because the mode employed is not suitable to the degenerated or domesticated state into which we have brought them; for we cannot imagine that the Creator, in spreading over the earth innumerable species of plants, intended that they should disappear; but on the contrary we may rest assured that He has given each of them the means of reproduction. These means are the seeds; but as man, always desirous of enjoyment, endeavours to procure new, by transporting into the country which he inherits, plants from a different region, and which are by this frequently rendered sterile, he must submit to the consequences of this transgression of natural laws. The various cares which plants require, and the difficulty which we experience in their propagation, have caused us to have recourse to a part of the plant less subject than the stems and flowers to the influence of climate.

I therefore consider the roots as being peculiarly adapted in most cases, if not in all, for the propagation of plants which will neither produce seeds nor propagate by cuttings of the shoots.—*Carrière, in Revue Horticole, June, 1852.*

CULTURE OF EXOTIC CYPRIPIEDUM.—They require to be grown in an orchid house, where they are of easy culture, producing their interesting flowers in the spring months. They should be grown in a temperature ranging, by day, from seventy-five to eighty-five degrees, and at night from sixty to seventy degrees. In the winter season, from sixty to seventy degrees by day is sufficient. While the plants are growing, the atmosphere must be maintained in a moist state; the plants also require a tolerable supply of water, which should be given with a syringe or a small pot round about the plant, but care must be taken not to water over the foliage, for this would be very likely to cause the plant to rot. In the winter and resting season water must be applied very sparingly, and the atmosphere must be kept much drier. The plant requires plenty of pot-room, and the pots must be well drained. The compost should be rich in vegetable matter; such as a mixture of one-half decomposed sphagnum, and one-half of rich fibrous peat-soil. The plant comes into flower in spring, and remains from two to three months in bloom, if kept in a warm dry house.—(*Magazine of Botany*.)



FLORAL

OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

A NNUAL flower seeds, as *Clarkia*, *Collinsia*, *Schizanthus*, *Ten-week Stock*, &c., now sown in small pots, well drained, and kept in a cool frame, or a spare corner in a cool greenhouse, through winter, will be suitable for turning out in the open borders at the end of March or in April. Such plants bloom early and fine; they are early ornaments for the flower-garden; and as they decline, the spring-sown plants are coming into bloom. Seeds of many kinds, *now sown* in the *open border*, generally survive the winter, and bloom vigorously early the next season. *Carnations*: the layers should be taken off, severing them *at a joint* as near the root as possible. Only a few of the bottom leaves should be trimmed off to admit the compost to settle closely round the stem, and that no leaves may rot inside the soil, and be likely to damage the main stem. The compost in which to pot them must not be rich, or the plants will be likely to grow too vigorous, and become what florists term too gross. Equal portions of year-old turfy loam and leaf-mould, with a small proportion of sand mixed therein, is rich enough, and of a dryish texture, and the plants keep healthy in it if otherwise duly attended to. They must have a liberal drainage: over the broken pot, &c., spread a portion of moss or turfy loam, in order to prevent the compost settling amongst the bits of pots, and to allow a free passage for the water draining away. The compost must not be sifted, but chopped, and in its rough state. In potting, place two layers in each pot. When potted, put them in a cool frame for about ten days, keeping the lights closed, and shaded from mid-day sun; this contributes to an immediate striking root afresh: afterwards they may be fully exposed in a sheltered spot, having a thick floor of coal ashes or boards to place the pots upon, in order to prevent worms entering. *Pinks*: beds of them may still be made, and the earlier the more successful: dig into the bed four inches in thickness of old manure; do it a week or so before planting, and plant as early in the month as you can. *Pansies*: beds of them should be made for next spring bloom. Pot some of all the best kinds in small pots, to be placed in a cool frame during winter. If the sowing of the seeds of biennials, as *Scabious*, *Canterbury Bell*, *Brompton* and *Queen Stocks*, &c., has been neglected, they should be attended to as early as possible. *Verbenas*: runners should be potted in small pots, a third filled with potsherds, and the rest with good loamy soil, placing them in a close cool frame for ten days, shading from mid-day sun: after which gradually expose them to open air. Attention to them should be *immediate*. *Bulbs*, as *Hyacinths*, &c., are now to be had, and the sooner they are potted the more vigorous they will bloom. *Chinese*

Primroses should be encouraged for winter blooming. If mildew appears on any plants, dust them with sulphur immediately. *Camellias* may be grafted; the operation may be performed with the greatest success by pursuing the method the French call "*graffe en placage*," which is merely inserting that portion of wood that includes a bud and leaf cut longitudinally into a corresponding cleft in the stock. The grafted subjects should be plunged in bottom heat, and kept covered for at least a month. *Roses* may still be budded. Nail to the wall young shoots of *Banksian Roses*. Cut clean away those not wanted. Prepare beds of *Sweet Violets*. *Roses* for forcing too. Collect seeds as they ripen.

IN THE GREENHOUSE, &c.

Cuttings of nearly all plants may be successfully struck yet; but the earlier they are put in the better. Towards the end of the month take in the tenderer greenhouse plants; but the house should be white-washed, &c., previously if required. Repot *Chrysanthemums*, if the pots they are in be full of roots; give manure-water once a-week. See on culture the articles in early numbers of this year. *Cinerarias*: pot off singly the offsets, also seedlings. Seed may still be sown, but as early as possible, in order to have the plants strong enough to pot off before winter. Cuttings of bedding plants should be put in directly. Pot off singly rooted cuttings of *Pelargoniums*, &c. Cuttings of *Tea Roses*, *China*, *Bourbon*, &c., soon strike root at this period.

BRIEF REMARKS.

LYCOPODIUMS. (Mosses for Stoves, Greenhouses, or Sitting Rooms.)—A day or two ago we saw, in a lady's parlour, a very ingenious and pretty use to which the *Lycopodium apodum* was applied. Long, oval-shaped, ornamental pots, or, perhaps, they might be dignified with the names of vases, about six inches deep, as much across, and fifteen inches long, were well-filled with soil, and some wide-necked glass bottles plunged nearly up to the rim in it. Then the surface was planted with the Lycopod, and completely covered with it. The vases had saucers of the same form; in these they were placed; this prevented the water, when applied to the soil, from dropping upon the carpet or floor of the room. The glass bottles were to contain cut flowers; and in the instance we saw they did so, and certainly had a novel and very pleasing effect, having much the appearance of miniature flower-beds upon a tiny, beautiful, green lawn. The vases were made of the material called terra cotta, and would last for years, if not broken by accident. This idea, we think, might be carried out to a great extent. Why not have the vases made larger, and the spaces where the bottles are filled up with plants in pots grown in a frame or greenhouse for the purpose, brought in when in flower, and renewed when the bloom is over? Plunged in this way, and the surface covered with the pretty green Lycopod, very little water would be necessary, and the roots of the plants would be then protected from the drying influence of the air in the room. The flowers would last much longer in perfection, and every bud would bloom. The vases might be made of any material combining elegance of form and durability, such, for instance, as glass, or cast iron, painted of various colours.

Lycopodiums may be used, also, to cover the borders of a conservatory or greenhouse. This has been done in many places at different gentlemen's seats, and in such a situation they are always admired, the green being so fresh and beautiful. We grow some of the drooping species in ornamental or rustic baskets with the happiest effect. In particular, we have some made of glass of a circular form; these are large enough to contain a sufficient body of soil to supply them with

nutriment. The kind used is the very ornamental *Lycopodium stoloniferum*. One specimen of this species measured a foot across, as much high, and drooped considerably over the edge of the glass vase, and was deservedly much admired.—*T. Appleby, Cottage Garden.*

THE DOUBLE BLUE HEPATICA WITH WHITE FLOWERS.—The following may be added to the many "sports" mentioned from time to time in your columns, for it is not met with every day. A plant of the double blue Hepatica produced very dark blue flowers in the spring of the present year; a second crop of blossoms is now on the plant. I have enclosed one of them for your inspection, and, with the exception of the outer petals, which are slightly tinged with blue, the rest of the flower may pass for a good double white Hepatica, a flower that is often sought after but seldom found. Could anything be done to prevent the flowers becoming blue in the spring of next year?—*Peter Mackenzie.*

COTONEASTER MICROPHYLLA.—In this Magazine for 1849 I noticed a recommendation of this trailing shrub for covering a wall, or other unsightly structure. That autumn I procured a quantity of plants, four feet, or upwards, high, and having an old wall seven feet high, I planted them against it. Last winter they were loaded with the *bright red* berries, and they continue still to be ornamental. The shoots have pushed two feet more this season, have borne abundant bloom, and fresh fruit is succeeding. Nothing can be better for the purpose; the plant is evergreen, too, and forms a close compact cover. It is especially beautiful with its rich coloured berries in such profusion. It does admirably, too, for a low edging to a bed in the flower garden; and when trained, a single plant to a pole, or formed to a standard tree, by dressing away the side shoots, and finally forming a head, its pendant branches laden with rich coloured fruit has a pretty effect in a shrubbery, or on a lawn.—*Belle Vue, Brixton.*

CHRYSANTHEMUMS IN POTS.—These are usually placed upon a bed of ashes, sand, or soil, into which the roots generally push, and tend to make the plants grow vigorously. The first week in September take up the pots, and cut the roots away which had pushed into the bed. This checks the growing of the shoots, tends to *consolidate* them, and induces them immediately to form blossom buds. This attention is particularly necessary with the *vigorous* grown *Minima* section. If the Chrysanthemums are growing out of pots in the open ground, then with a spade sever the roots at about four inches from the main stem, on one side now, and on the other in the course of a week or ten days. Finally pot the plants early in October, if desired for indoors.

CHINESE AZALEAS.—In the following compost they flourish admirably. A rich brownish, turfy peat, which has been heaped for half a-year, chopped and turned over a few times, to which add about one-sixth of silver sand, and a liberal sprinkling of bits of charcoal, and porous stones. Always have a free drainage, and the peat must not be sifted, but in a broken open condition. In the *growing* season give liquid manure once a-week, it promotes their vigour, and a fine *green* foliage. They require to be forced into quick growth immediately after blooming, and whilst here to be frequently syringed over head with soft water, doing it a little while before the sun declines from the pit or house. When the shoots have extended the desired growth, give water more sparingly, and admit air more liberally, in order to get the wood of the new shoots firm, and to promote the setting of the flowering buds. Allow the plants to have a due portion of sun in summer, and never place them in a shady situation, or the foliage will turn brown. During winter keep the plants *just from frost*, whether in a pit or greenhouse. As soon as the plants cease blooming repot them, never do it in spring, for if repotted then, it will cause new wood to push, and the shoots will rob the previously formed flowering buds, and prevent the blossoms appearing.—*A Practitioner.*

ON RAISING SEEDLING CARNATIONS.—On turning over the pages of one of the numbers of the present year's *Midland Florist*, I cast my eye on an article written by Mr. Dodwell, on the Carnation, in which he advises seed to be sown *on a gentle heat*, and to be sparing of water. What need there can be for bottom heat to facilitate the growth of seed that will vegetate in nine or ten days, I am at a loss to conceive. Twenty-five years ago, when I first sowed seed, I was advised to sow *nearly half an inch deep*, without heat, and plants so raised, for the most part bloomed next year. I continued for some years to sow in the same way, with perfect success, as far as raising plants was the question; and the list of dealers,

seventeen or eighteen years ago, will show some flowers of mine considered good. A lapse of many years occurred before I again began seedling raising. In the spring of 1850, having saved a considerable quantity of seed in 1849, and supposing that the custom of *using heat and shallow sowing* must in that interim have been discovered to be an improvement, I adopted it, and found that hundreds damped off, or "shanked." In 1850, I saved but a single pod of seed, and returning to my old system of deep sowing and a northern aspect, I shall this year bloom every plant so raised, every seed having, I believe, produced a plant. Last year, I again sowed a rather large portion of seed, which has produced a two-light box full of plants; and these were sown in pots and pans, fully exposed to the atmosphere, and carefully kept out of the influence of the sun heat, in a northern aspect, where, at least, they received no more than the early and late rays of that luminary, keeping the surface soil constantly moistened, the pots, &c., being carefully and efficiently drained, so that no superfluous moisture might remain long in the soil. Plants so raised will be found to drop their cotyledons almost on the surface of the soil, and give not the least trouble to the raiser.—*J. W. Newhall: Midland Florist.*

ON THE EPACRIS.—All the species of *Epacris* are natives of New South Wales, and they, as well as the vast number of hybrids, are very handsome shrubby greenhouse plants. Their culture is very simple and easy. Those of delicate slender habit require to be grown in equal parts of light sandy loam and peat, but all the vigorous growers thrive best in sandy peat alone. They nearly all come in flower from February or March, and continue blooming until June or July, a few bloom most of the winter, as well as spring and summer. In June they must be turned out of doors with the other greenhouse plants, but *previous* to which, it will be necessary to *pot them*, in most cases shifting them into larger pots; this is indispensable, as their roots are so fine a texture, that if the pots be placed out of doors, and consequently exposed to the alternations of heat and cold more than when in the house, *the roots against the sides of the pots* will receive material injury, the plants will become brown, and in most cases die; this I have seen in very many instances. Good drainage in every case must be attended to, for any deficiency here will seriously injure if not totally destroy the plants. Never sift the soil in which the plants are potted, but chop and break it well, although in some cases this is scarcely necessary, when the turfy parts are well rotted. Never allow the soil to become *hard and dry*, particularly amongst those species potted in sandy peat alone; because, from the delicacy of the fibres of the roots, this cannot be the case without the plants being materially damaged, if not destroyed. In potting, never cut off the matted roots with a knife, but merely pull them with the fingers without damaging the ball more than is necessary. Always let the plants stand in an *airy part* of the greenhouse, and never crowd them among other plants, or they will not prosper.

GARDENIA RADICANS. (Cape Jasmine.)—When the plant has ceased blooming, then repot it, and promote its vigorous growth, giving liquid manure once a-week. It grows best plunged in a gentle warmth in a hot-bed. When the new shoots are the desired length, then let the plants be exposed to the open air, say from the middle of August to the beginning of October, by this attention the new wood becomes firm and properly ripened. Let the plants be taken in when the other exotics are, be kept *barely moist* in winter, and as early as January you may begin to force them into bloom, taking in other plants successively every three weeks. They bloom best plunged in a dung bed or bark bed frame, when the flowers are nearly expanding remove the plants if desired into a greenhouse, setting room, &c. It flourishes in equal parts of rich loam, peat, and well-rotted leaf mould, with a liberal drainage.—*A London Florist.*

LESCHENAUTIA FORMOSA.—This beautiful little plant, in its appearance, is very similar to the *Erica*, and like those plants require to be grown in bog or peat earth. It is also remarkable for the great length of time it continues flowering, commencing early in February, and can scarcely be said to have finished its bloom the November following. In its growth it never attains a very great size, and is particularly adapted for small fancy vases, as it does not require a large pot, indeed it flourishes much better when grown in small sized pots, and has a bright blood-coloured flower, but when confined in a room it is almost sure to change to a bright orange, but by being exposed to the air it very soon regains its former colour; it is

not so difficult to keep as the *Erica*, but like them should never be allowed to get quite dry, but always be kept moist, at the same time not to be saturated with water. It is very hardy, and will bear to be exposed to the air during the day time when the weather is not frosty, and from the end of May can be kept out of doors altogether.—*An Exhibitor.*

TRANSMISSION OF FOREIGN SEEDS.—Mr. M'Nab recently communicated to the Botanical Society of Edinburgh, that he brought over from America seeds of many of the rarer Oaks, &c. in boxes filled with soil, taken from a depth of ten inches below the surface, so that they possessed only the *natural* dampness. A layer of soil two inches deep was placed at the bottom of the box upon which a layer of seeds was distributed; another layer of soil, and then seed, and so on till the box was full. Each box was 14 inches diameter, made of three quarters inch deal wood. The soil and seeds were pressed down very closely. Arriving at Edinburgh in December, he had the seeds and soil sown over the surface of shallow pans and boxes. During the following spring they grew admirably, whilst of a quantity brought over at the same journey, wrapt up in paper bags, &c., very few succeeded. More recently (last October) Mr. M'Nab has had a quantity of seeds sent from the West Indies, packed in soil, and were immediately sown, they have vegetated most successfully, and grown admirably this season.

ORNAMENTAL CREEPERS.—I should be very much obliged, if some reader of the *Cabinet* would give a list of Ornamental Creepers, or climbing plants, suited to train against a wall, trellis, pillar, or arbour. A list of greenhouse, and one of hardy kinds, will confer a great kindness on *Flora*.

CHARCOAL.—This is an impure form of Carbon, and is manufactured on a large scale for the purposes of the arts. The process of manufacture consists in exposing to heat billets of wood, or other organic matter, under such conditions as either wholly or partially to exclude air. Charcoal has several properties which render it of value to the cultivator. As a manure, it does not act by furnishing carbon to the vegetation; because it is, in reality, one of the most indestructible substances known, and remains for an indefinite length of time without change. But it is remarkably absorptive of certain gases, which it retains within its pores in a state of high condensation. A fragment of freshly burned charcoal condenses as much as ninety times its bulk of ammoniacal gas, and thirty-five times its volume of carbonic acid. As these two gases form the principal organic food of plants, it is obvious that charcoal may have a powerful individual action upon the growth. The experiments of Saussure and others, have shown that plants flourish with great luxuriance when the atmosphere in which they grow contains more than the usual amount of carbonic acid. Charcoal, after having absorbed carbonic acid and ammonia from the air, places plants under favourable conditions for receiving and appropriating a larger than usual amount of this organic food. The only difference is, that instead of entering the plant by the leaves, they reach it through the roots, which absorb the rain water containing these gases, washed out from the charcoal. Thus, charcoal, from its absorptive nature, becomes an indirect means of increasing the supply of carbon and nitrogen to plants. Different kinds of charcoal have varying values in this respect. Experiments made by exposing freshly burned pieces of charcoal in the air, showed their different absorptive powers, by the increase in weight after they had been exposed a week to the atmosphere. The charcoal from fir gained 13 per cent. in weight; that from *lignum vite*, 9·6; that from box, 14; from beech, 16·3; from oak, 16·5; and from mahogany, 18. Charcoal also possesses the property of absorbing and retaining the odoriferous and colouring principles of most organic substances. It is, on this account, used for removing the putrefactive taint from foul water, or other putrid substances. When used as a filter for foul water, both the smell and colour are removed.—*Prof. Playfair, in Morton's Cyclopaedia of Agriculture.*

REMARKS ON THE OLD DOUBLE YELLOW ROSE.—The Rose has very much engaged my attention for several years, in order to ascertain by what means the evil of the buds being injured, and dropping off might be avoided, and I am now enabled to state that if the following treatment be pursued a splendid bloom may certainly, and invariably, be obtained. The plant requires to have a good loamy soil, upon a dry substratum, moderately enriched. It must be planted against a good aspected wall, either full south or as near as circumstances admit of the latter. The plant must be trained as is done to a *peach tree*, “and early in summer, when

the shoots are young, a suitable portion must be secured to the wall, as is done to the peach, and all others be taken clean away." As soon as it is perceived the shoots have embryo buds upon them, a cover of canvas, or something that will cause shade, must be fixed so as to cover the entire plant. This shading is essential to success. If the covering is placed so as to keep the rains from the border, recourse must be had to watering, also an occasioned sprinkling by means of syringe must be given over the foliage.

When the blooming is over, the shading is no longer requisite, and its removal is necessary to promote the ripening of the shoots for the next year's supply, which is an essential point to be obtained. My first success with blooming the rose successively was by the following circumstance. A plant was growing at the south side of a vase placed on a pedestal, around which the branches were trained. At the blooming season I found all the buds on the south (sunny side) went off in the usual way, but all that portion of the plant which was on the shady side produced perfect bloom in perfection. It appears to me to be essential to obtain well ripened wood, and then to give shade during the period from buds being formed to blooming. These being obtained success is certain. I have a plant which now annually produces a profusion of fine flowers treated in the manner above specified. During the first summer that I trained the plant against the wall, a considerable quantity of young shoots was produced. In order to assist the shoots that had buds upon them, I cut off all others, which amounted to three parts of them, so sudden a destitution caused all the buds to drop off, but when the shoots are stripped off at an early stage this evil is entirely obviated.

TOWN'S EXHIBITION OF CARNATIONS AND PICOTEEES HELD AT DERBY, August 4, 1852.—The requirements were "A Town's Collection of 12 dissimilar varieties of Carnations, and the like number of Picotees, to be shown in boxes of the Horticultural Society's (of London) dimensions." A spirited competition took place, and York, Leeds, Wakefield, Middleton, Birmingham, Leicester, Edinburgh, Nottingham, Northampton, and Stamford, each contributed something to the general gathering. Through untoward circumstances Middlesex was unrepresented. CARNATIONS: 1st, *Derby*, with Seedling, S.B., Flora's Garland, Premier, Firebrand, Lorenzo, Lord Milton, Admiral Curzon, Magnificent, Cradley Pet, Squire Meynell, and Princess (Seedling); 2nd, *Birmingham*, with Premier, Lord Ranccliffe, Briseis, Admiral Curzon, Ariel, Miss Thornton, Pollington, Lydia, Black Diamond, Lord Lewisham, Lady Rhodes, and Lovely Ann; 3rd, *Nottingham*, with Taylor's Lucia, Hale's Albert (Seedling), Lady Peel, Earl of Leicester, Falconbridge, Admiral Curzon, Lord Byron, Lord Milton, Lady Gardiner, Firebrand, and Oberon; 4th, *Leeds*, with Lord Milton, Magnificent, Great Northern, Rainbow, Firebrand, Ariel, William the Fourth, Lady Ely, Rose Helen, Admiral Curzon, Paul Pry, and Justice Shallow; 5th, *York*, with Miss Thornton, Lord Ranccliffe, William the Fourth, Admiral Curzon, Ariel, Knostrop Pet, Lydia, Briton Splendid, Rainbow, Squire Meynell, and Brilliant; 6th, *Wakefield*, with Seedling No. 2, Beauty of Brighouse, Admiral Curzon, Lady of the Manor, Hepworth's Leader, Lord Ranccliffe, Nulli Secundus, Seedling, Lord Milton, Seedling, Squire Meynell, Patriot; 7th, *Leicester*, with True Briton, Duke of Rutland, Prudence, Earl of Leicester, Gladiator, Briseis, Black Diamond, Squire Meynell, Lorenzo, Hamlet, Queen of Purples, and Princess Royal. A fine stand from Edinburgh was disqualified, containing a self-petal. TWELVE DISSIMILAR PICOTEEES: 1st, *Derby*, with Mrs. Norman, Duke of Rutland, Ganymede, Green's Queen, Mrs. Barnard, Venus, Alfred, Ophelia, Bayley's Seedling, Mary, Prince of Wales, and Isabella; 2nd, *Birmingham*, with Audrey, Prince of Wales, Alfred, Green's Queen, Elizabeth, Mrs. Brown, Duchess, Delicata, Venus, Amethyst, Mrs. Barnard, and King James. 3rd, *York*, with Alfred, Green's Queen, Lady Franklin, Miss Rosa, Red Rover, Mrs. Wood, Elizabeth, Portia, Delicata, Mary Ann, Mrs. Barnard, and King James; 4th, *Nottingham*, with Princess Royal, Elizabeth, Juliet, Green's Queen, Gem, Lord Nelson, Prince of Wales, Duke of Rutland, Enchantress, Isabella, Alfred, and Mrs. Barnard; 5th, *Leeds*, with Mrs. Barnard, Elizabeth, Lady of the Lake, Prince of Wales, Regina, Ann Schofield, Alfred, Christabelle, Cerise Blanche, Mrs. Norman, Duke of Rutland, and King James; 6th, *Leicester*, with Prince of Wales, Duke of Rutland, Nina, King James, Venus, Christabelle, Lord Nelson, Youell's Gem, Bates, Seedling, Mrs. Norman, Prince Albert, and Jenny Lind,

Univ. of
California



Hibiscus. New York



OCTOBER, 1852.

ILLUSTRATIONS.

HIBISCUS ROSA-SINENSIS—VARIETY.

THE Stork is very fond of the leaves and tender branches of this tribe of plants, and from this circumstance the name *Hibiscus* (derived from *Ibis*, a *Stork*) has been applied.

The *Hibiscus Rosa-sinensis* (*Rose of China*, or *Chinese Rose*) is held in high estimation in that country, as well as in other parts of India, where it grows naturally. It is called by the Indians "The Gem of the Sun." In its native situation, it grows to a moderately-sized tree, and its large *rosy-red* blossoms, produced in profusion, render it very ornamental. In China and Cochin-China it is said to be very commonly used for garden hedges, as well as singly in the gardens for ornament. Latrobe speaks of it as making a conspicuous figure in the hedges of the Cape of Good Hope, and there growing to the height of twenty feet. The Indians make these beautiful flowers into festoons and garlands on all occasions of festivity, and even in their sepulchral rites. They are also put to a humble and very different use, that of blacking shoes, whence it has been named the *Shoe-flower*. The flowers yield a very black pigment: on this account it is said to be used for blacking the scabbards of the hangers in Batavia. The females blacken their hair and eyebrows with these Roses, which bloom nearly all the year round.

We are informed by plant collectors that the *Hibiscus*, in its native localities, flourishes the best in a deep loam, upon a dry substrata. In our stoves, &c., they succeed best in equal portions of *rich loam* and peat.

The *Hibiscus Rosa-sinensis* was introduced into England just one hundred years ago, and has been an inhabitant of our hothouses in general throughout the nation. The flowers of the original species are *single*, of a dull red colour. We have long possessed, too, several *varieties* both single and double-flowered. There are the double red,

double crimson, double buff, double yellow, double flesh, and double variegated; all of them are highly ornamental: so are the single blossomed. Of these latter, the *H. Parkerii* has flowers of a *rich red*, with a deeper coloured centre, very handsome. The variety which we now figure is much superior to it or any other we have seen; its *intensely rich brilliant scarlet flowers, with a dark centre*, are most splendid, and render it deserving a place in *every stove or warm greenhouse*. It is a seedling raised by a gentleman in the Isle of Wight, and blossoms of it have been sent us by Mr. Samuel Whitmore, nurseryman, near Ryde, in that island, who possessed the stock.

NOTES ON NEW OR RARE PLANTS.

ABELIA TRIFLORA.—Major Madden sent seeds of this pretty *half-hardy shrub* to the Glasnevin Botanic Garden, Dublin. Mr. Moore, the curator, states that “four years ago seeds were sown, and of the plants raised the first has bloomed this season (1852). I consider it an acquisition in the way of a *hardy shrub*. Our plant is about three feet high, and covered over with pretty pink blossoms.” The plant had been put in the open border four years ago, where it flourished without protection. It forms a neat branching shrub, blooming profusely. The flowers are borne at the ends of the numerous shoots, three blossoms together, and each terminal head has two or three of these clusters. The blossom has a tube three parts of an inch long, pale yellow at first, becoming tinged with red; but when the flat, five-parted limb (end of blossom) opens, the surface is white, tinged with rose, and is half an inch across. It is a charming neat shrub, either for the greenhouse or open air, in a sheltered situation. Dr. Wallich states that it is found wild on the highest mountains towards the Himalaya. He also states the blossoms are highly fragrant. (Figured in *Paxton's Flower Garden*, plate 91.)

BRYA EBENUS. THE JAMAICA EBONY.—This West Indian shrub is common in Jamaica, where it attains the height of five or six yards; but when grown in a stove it maintains a branching shrubby character. It is an evergreen, with box-like leaves, and blooms in profusion. The flowers are *pea-shaped*, each blossom three parts of an inch across, of a bright orange-yellow colour, each twiggy shoot having a long spike of flowers; and Dr. Fayden says, “that on the Jamaica hills it reminds the traveller of the Broom of Europe.” The flowers are fragrant. This shrub is very different from the true Ebony of commerce, viz., *Diaspyros ebenus*. It merits a place in any stove collection, being highly ornamental. (Figured in *Bot. Mag.*, 4670.)

CACTUS CRENATUS GRANDIFLORUS.—The flowers are large, of a creamy-white; the sepals are yellow and brown outside. A beautiful variety, which is in the possession of Mr. Green, gardener to Sir E. Antrobus, of Cheam.

CALANTHE VESTITA (Orchideæ).—This Indian orchid has been introduced by Messrs. Rollison, of Tooting, where it has bloomed;

also with Messrs. Veitch. The scape of flowers is about a foot long. Each blossom is nearly three inches across, white, and its large spreading lip has a striated spot of orange-yellow at its disc. (Figured in *Bot. Mag.*, 4671.)

CALANTHE VIRIDI-FUSCA.—It has bloomed in the orchid house in the Royal Gardens of Kew. The scape of flowers half a yard long; each blossom an inch across; petals and sepals narrow, of a greenish-brown; lip yellowish-green, spotted or dotted in lines of purple; column yellow, tinged with rose. (Figured in *Bot. Mag.*, 4669.)

CURCUMA ROSCOEANA (Scitamineæ).—A native of Pegu, in the East Indies. It has recently bloomed in the stove at Sion House gardens. The plant has large oblong leaves, about half a yard across; the spike of flowers is nearly a foot long; each blossom, cell-formed, is about an inch across its mouth; the bracts (sides of the hollows) are of a deep orange-red, tinged with green; and each hollow contains two or three bright yellow flowers. The large cells are arranged around the spike, in the way of a honeycomb. It is very ornamental. (Figured in *Bot. Mag.*, 4667.)

DICHOSEMA SUBINERME (Leguminosæ).—A native of Australia, from whence it was obtained by Messrs. Henderson, of Pine-apple Place Nursery. It forms a branching shrub, having somewhat the habit of the *Chorozema Henchmannia*. The leaves are heath-like, half an inch long. It blooms in profusion, having long spikes of its pretty pea-formed flowers. Each blossom is about half an inch across, bright yellow, with a rosy-crimson zone upon the base of the standard and wings. It is a charming greenhouse plant, and deserves a place in every one. (Figured in *Mag. of Bot.*)

DIPLACUS GLUTINOSUS, var. **GRANDIFLORUS.**—Many of our readers have long known the pretty greenhouse shrubby plant which has borne the name of *Mimulus glutinosus*, but which has latterly been named *Diplacus glutinosus*. The one we now particularly notice is a variety whose blossoms are much larger than the original kind. The tube of each blossom is near two inches long, orange-red; the limb (end of flower) is two inches across, lobes deeply divided, of a yellowish-buff. It is a showy greenhouse shrub, blooming in profusion. This variety has recently appeared in some nurseries under the name of *Diplacus leptanthus*, but erroneously, that being a very different one. (Figured in *Paxton's Flower Garden*, 92.)

DOUBLE-BLOSSOMED CRIMSON CHINESE PEACH.—There is an excellent coloured plate of it in the September number of the *Magazine of Botany*. The flowers, however, are not a *full double*, nor are those of what is called the *double-blossomed white Chinese Peach*. Both, however, are very handsome spring-flowering ornaments. They flourish either in the open air, like the Almond does with us, or prove excellent ornaments, grown in pots, for the greenhouse or conservatory, bearing well to be forced, and under cover the flowers escape injury from frost or rain. They merit a place, where practicable to grow them, in-doors or in the open ground.

HARDENBERGIA OVATA ALBA.—A pretty twining plant, having *white* flowers with a green spot at the centre. They contrast strikingly with the blue and purple colours of the other species. It merits a place in every greenhouse.

MALCOLMIA LITTOREA (Syn. *Cheiranthus littorea*; *Hesperis littorea*).—This beautiful plant is a native of southern Europe, growing along the coasts of Spain and Portugal and other places. In England we treat the plant as an *annual*, but in warmer climes it is at least *biennial*—the lower part of the stems becomes quite woody. In England, as annual, it grows erect, about a foot high, and blooms freely, the flowers being in form like those of a *single-blossomed* Ten-week Stock, each blossom being nearly an inch across, of a delicate bright pink-purple. They are produced in open, terminal, many-flowered, and erect racemes. It is a very pretty flowering plant, deserving a place in every flower-garden.

MORMODES IGNEUM (Orchideæ).—A stove plant, from Central America. The flower-stem grows to about a foot high, and one of Mr. Rucker's bore a dozen large fleshy flowers, each blossom two inches across. Sepals and petals deep chocolate-coloured, and the lip a rich fiery orange-brown. Very pretty. (Figured in *Paxton's Flower Garden*, 93.)

MORMODES MACRANTHUM.—Its numerous flowers are borne in an open raceme, each blossom being nearly six inches across, of a deep chocolate-brown colour, and having a large oval lanceolate *flat* lip.

PELARGONIUM ATTRACTION (Kinghorn's Seedling).—The centre of each leaf is green, surrounded by a band of brown-purple and red, beyond which is the white margin. The flowers are of tolerable form, in large trusses, of a cherry colour. It contrasts very nicely with his Flower of the Day.

THYSACANTHUS RUTILANS (Acanthaceæ).—A stove plant, from Columbia. It is half-shrubby, and produces terminal or axillary pendant racemes of numerous tube-formed brilliant crimson-scarlet flowers, each blossom being two inches long. It is a very ornamental plant. (Figured in *Van Houtte's Flore des Serres*.)

TROPEOLUM DIGITATUM.—From the Caraccas. A handsome climbing plant, supposed to be perennial. The flowers have the calyx and spur a carmine-red shading off into green, and the petals are yellow, with a hair-like edge. It is grown in the continental nurseries, and is very handsome.

Noticed in the Royal Gardens of Kew.

The season has been very unfavourable for the blooming of the scarlet class of what is usually termed Geraniums. The best in these gardens are—**PUNCH**, which is unequalled; its *fine heads* of large excellent-formed rich scarlet flowers, borne, too, in profusion, are now

(September 20th) very ornamental. The petals are of good substance, and thus are not injured by the excess of rain, as the *thin*-petalled are.

QUEEN OF SUMMER.—This, too, stands the rain well, and a bed of it is now very showy.

FROGMORE SCARLET (the true) is also fine thick-petalled, and a free late bloomer. It grows *a foot high*. There is another variety, which grows from two to three feet, often sent out instead. The above two are also admirable for blooming well late in the season. So is the PURPLE AND LILAC UNIQUE.

MOORE'S DEFIANCE has foliage much like that of Unique; the flowers, however, are of a *bright red*, with a dark velvet spot on the upper petals. The petals are rather narrow; the flower, two inches across, and borne in profusion. It makes a fine show even now.

KING RUFUS.—The flowers are of a bright scarlet, foliage medium size, and thus the flowers show well; each blossom two inches across. The plant is very spreading, and blooms freely. It is now very fine.

LADY FLORA HASTINGS (fancy class) is an excellent late bloomer. In consequence of being short of plants, *the bed was thinly supplied*, and half its surface of soil being visible, spoiled its appearance. In planting beds with Geraniums, or any other of what are termed "bedding plants," there must be as many as will *nearly* conceal the soil at the time of planting, so that the extending shoots may intersect and form a mass of flowers. If thinly planted, the wind cuts between, and the bed looks meagre through the season; better have to thin out than lack sufficient quantity.

FUCHSIA PUMILA.—This is a very dwarf-growing variety, by some called Tom Thumb, Liliputian, or Minima. It grows in the bed here from six inches to a foot high, has narrow leaves and a *profusion* of flowers; tube and sepals scarlet, with a rich deep violet-coloured corolla. It is very pretty, and admirably suits the circular bed it occupies. It blooms all the summer.

MENZIESIA DABÆCIA.—This *most profuse* blooming Irish Heath forms a fine dwarf shrubby plant for a circular bed. The plants feather down to the grass, and are about two feet high at the centre of it. The beautiful *purple* flowers of one bed, in contrast with the *white* variety on the opposite side of a garden, produces a very nice effect. They are valuable bloomers for the latter part of the season; now in full bloom.

SWEET ALYSSUM.—The bed filled with this fragrant, *variegated-leaved* annual, and intermixed with the brilliant scarlet Verbena, is still very beautiful; the heads of Verbena flowers, just peeping over the surface of the white Alyssum, are very pretty. The blue-flowered Verbena, as well as bright rose one, also make a pretty contrast with this variety of Alyssum. Another bed of it had an edging of one of the dwarf spreading Lobelias, but it did not appear to advantage.

GERANIUM JUDY.—A bed of this is now very showy, the plants a foot high, and in profuse bloom; flowers a pretty salmon-red; contrasts well with Punch.

DRACOCEPHALUM MOLDAVICUM.—The numerous spikes of its light

blue tubular-formed flowers render it a pretty dwarf bushy herbaceous border plant.

PERSICARIA ORIENTALE.—This hardy annual plant, at the back part of a long border of mixed flowering plants, produces a charming effect now. The plants are from three to four feet high, bearing a profusion of drooping coral-red flowers. There is a white-flowered variety, equally vigorous. In a mixed border of some extent, these plants appear in graceful elegance. We do not approve of a mixture of herbaceous plants among shrubs, but where such are desired these are very ornamental. In some beds of shrubs at Kew there are a number of the new tall tree-like Balsams, which bloom freely and are pretty.

ASTER GRANDIFLORUS.—A beautiful Michaelmas Daisy, bushy, three feet high; a profuse bloomer. The flowers are two inches across, a light blue with a yellow centre. Very ornamental; ought to be in every garden.

ASTER DRACUNCULOIDES.—Three feet high; leaves narrow, flowers blue and violet, each two inches across, borne in profusion. Very pretty.

ASTER TRADESCANTI.—Three feet high, blooming profusely, each flower being near two inches across, of a pretty rosy-violet. Very handsome.

ASTER CONCINNUS.—Three feet high; a profuse bloomer; each flower one inch across, light blue, with a bright yellow centre. Very handsome.

ASTER PYRENÆCEUS.—Three feet high; free bloomer; each flower two inches across, of a deep lilac. Very pretty.

CAMPANULA VINCAFLORA.—A very pretty hardy herbaceous spreading plant, growing about half a yard high, blooming profusely; each flower an inch and a half across, of a pretty light blue. Now in fine bloom in the borders.

HIBISCUS SYRIACUS.—The *Althæa frutex* is a well-known and admired shrub. There is a large oval-shaped bed of its species and varieties, and most of them have been for some time, and still are, in fine bloom. One plant, named *H. flora alba grandiflora*, is especially beautiful. Each flower is about five inches across, expands fully to view, of the *purest white*, with a large *dark crimson spot* at the base of each petal. It is a profuse bloomer, and very handsome. There are other fine kinds, which we will describe another month, as double blue, double white, double blush, double striped, double crimson, &c.

COLUTEA POCOCCII.—This is a tree-like shrub, six feet high, very branching. The pinnate foliage is neat, and the outer shoots are laden with the pretty pea-formed flowers, of a chesnut colour, with a yellow centre. It is a charming flowering shrub for summer and autumn; now in profuse bloom, and valuable for near the house.

LEUCANTHEMUM LACUSTRE. **OX-EYE DAISY.**—A hardy herbaceous plant, two to three feet high, blooming in profusion. Each flower is about *five inches* across. The centre is yellow, and the petals pure white. It is very showy, and, grown in contrast with the fine yellow Rudbeckias, produces a pretty effect.

TREATMENT OF THE GENUS ANECTOCHILUS (ORCHIDACEÆ).

BY MR. JOHN BURLEY, FOREMAN AT THE WELLINGTON NURSERY, ST. JOHN'S WOOD
ROAD, LONDON.

MANY of the readers of this Magazine have noticed in the Royal Gardens of Kew, or probably in some other celebrated collections of stove plants, the *rare* and handsome species of ANECTOCHILUS, whose leaves are so strikingly beautified with a surface of elegant net-work, displayed either by golden or silvery-coloured veins; and I hesitate not to state, none ever saw and examined, but greatly admired them. Being rare, little is known of their proper management; but having succeeded in growing them very much superior to any I have seen elsewhere, I forward the particulars of my treatment for an early insertion in your Magazine.

Mix two parts of leaf-mould (*half* decayed is best); one part of good peat, using it in its rough state; one part of sphagnum moss, with a little silver-sand and potsherds (broken small); the whole to be well mixed together. Then take the pot you intend growing the plant in, and put in a liberal drainage of broken crocks, upon which have a layer of moss, to prevent the mould being washed among and choking up the drainage. In the process of potting do not press the compost too tight in the pot, and let the plant be, when finished, about a quarter of an inch or so *above* the rim of the pot, so that the water may drain well from it. After potting, place the pot in another which is two sizes larger, and fill the space between the two with moss, slightly pressing it therein. This attention is essential to success, so that the soil may always be *kept moist*. Then, finally, get a *clear* bell-glass which is just large enough to cover the plant and *the pot that* CONTAINS IT; place it over the same, and it must be kept so, except for about *one hour* every morning.

The best situation to grow it in, during summer, is to have it in the *most shady* part of an orchid house, and, at the same time, in the *moistest*. The shining rays of the sun must be kept from it *throughout this period*, excepting for a *short time* in the morning and evening. During winter, however, it must not be shaded, but be in a more pleasant situation, where the rays of the shining sun reach it. In respect to watering, I recommend a *little* to be given at each time, in preference to what is termed a good *drenching*, as it requires to be kept *only just moist*. In watering, care must be taken that water does not fall *upon the leaves*, for it sometimes causes a spot to form, and thereby disfigure them.

The best method of increasing the plant is to take a side shoot from the old plant, with a rootlet to it, and treat it in all respects as above detailed.

I have already remarked that the leaves are particularly handsome, and in this alone consists their beauty, the flowers not offering the least attraction; so that when there is the appearance of a blooming stem, let it be immediately pinched off, and with the thumb and finger press the moisture out of the small part of the stem left in the heart of the

plant, in order to prevent it rotting the entire, for it is very liable to rot if not so pressed. The plant, being thus prevented blooming, soon pushes afresh.

There are many kinds of these truly beautiful plants; a few of the following are worth cultivating, wherever practicable, and are not expensive, the prices varying from 7s. 6d. to 42s. each.

A. setaceus, from Java, in 1836; the gold-leaved; most beautiful foliage.

A. intermedia, also a gold leaf, rather freer in growth than most of the dark foliaged kinds.

A. pictus, 1843, also called *Physurus pictus*; this is one of the silver-leaved, having a very handsome blotch in the centre of the leaf.

A. argenteus, also called *Physurus argenteus*; this is the silver-striped, which is very easy of cultivation, from Ceylon.

A. Lobbianus, from Java, 1847, is a very choice species.

There are several other choice species, mostly introduced from Java and Ceylon, where, in their native homes, they grow in shady places by the sides of hedges, &c.

When properly grown, they are exceedingly interesting and beautiful, and very amply repay for any attention.

DESCRIPTIVE LIST OF TWENTY-FOUR OF THE BEST FORMED AND MOST DISTINCT VERBENAS.

BY MR. JOHN BURLEY, FOREMAN AT THE WELLINGTON NURSERY, ST. JOHN'S WOOD ROAD, LONDON.

EACH successive year, for the last ten years, we have had improved varieties produced by the cultivators of this very lovely flower; but during the years 1851 and 1852, the new ones sent out have been much superior beyond any equal period. An immense number have been raised and sent out during those years by the continental florists; and out of a host I have selected and accurately described twenty-four of the most superb, and which are deserving a place in every collection:—

Adonis (Boucharlat), white, beautifully mottled with lavender; fine close truss, good habit, and extra free bloomer.

Casanora, very dark purple-maroon, with a pure white eye, close truss, good shape and habit; very distinct.

Celina Mallet, the best white yet raised for bedding; free bloomer, and of compact habit.

Cerise Unique, bright cherry, with a yellow eye, moderate truss and good habit; an abundant bloomer.

Cleopatra (Nivert), very deep maroon, with a darker eye, an immense truss; very showy, and a good bedder.

Comte Desamy, fine rose, with a bright red eye, truss and habit moderate; a very striking variety.

Diana, shaded red, with a maroon centre, very large truss and a good habit; distinct and fine.

Etoile de Venus, pale flesh, with a rose eye, an immense truss, and a good bloomer.

Juliette (Nivert), fine maroon, good shape and habit, extra large truss, and one of the best flowers of this season.

La Camargo, blue, with a dark eye and a white ring surrounding the eye; a distinct and good bedder, and free bloomer.

La Flamboyante, a good scarlet, with a truss and habit of the best class.

Madame Denis (Denis), cherry and rose, mottled, with a bright red centre.

Madame Legros, pure white, striped with lilac, good truss and habit; very distinct and fine. This variety has the appearance of a *Phlox Drummondii* Mayii.

Madame Luther, white, splashed and mottled with lavender, and a violet centre; profuse bloomer.

Mazeppa, rosy-pink, with a dark centre; good variety for bedding.

Mirabeau, good crimson-scarlet, close truss and habit; fine for bedding, being very compact, and a free bloomer.

M. Jullien (Young), fine scarlet-crimson, with white eye, moderate truss, and free bloomer; good foliage and habit.

M. Paquin, violet-blue, with a fine white eye; splendid shape, with good truss and habit.

Petrus Morel, a beautiful pink, the finest of its colour in cultivation; good truss and habit.

Racine, fine bright rose, with a dark centre, good truss and habit; one of the best of the season.

Richelieu, very deep maroon, immense truss; strong grower, profuse bloomer, and a good bedder.

Tenerus, bright rose, good shape and truss; free bloomer.

Zelia, fine rose, with a dark centre, good truss and habit; a great improvement on *Macrantha*.

Zenobia (Boucharlat), violet, beautifully mottled with lavender, and a dark crimson eye; fine truss and habit.

THE AUTUMN-BLOOMING CROCUS.

BY A COUNTRY CLERGYMAN.

I HAVE taken the numbers of this Magazine from its commencement, twenty years ago, but do not recollect seeing the name even of Autumn Crocus anywhere, except on the advertising sheets. I do not find its name in the Indexes.

This week I was visiting a friend who has a fine collection of nearly all the prettiest exotics, as well as flower-garden plants, and I was particularly pleased with a beautiful display of several kinds of Autumn-blooming Crocus. The bloom of the principal part of the border herbaceous plants was over, but the beds had still a most cheerful appearance by a profusion of these lovely Crocuses. Every garden ought to contain a collection of them, especially if near to the dwelling-house. My friend had a considerable number, too, in pots, which were kept on the north side of a wall. He had some which had been put into the greenhouse, and along a terrace in front of the house; they

had a very cheerful appearance. Those remaining behind the wall being kept back, are brought forward in succession, and he thus has them in bloom till after Christmas.

He grows them admirably in a rather dry but *deep* loamy soil, and his gardens are well sheltered on all sides, except to the south. Those in pots have a liberal drainage. He keeps them in a cold pit or frame during winter, when not in bloom. They increase freely by offsets. He has ten species and varieties—blue, purple, lilac, rosy-lilac, and white—of various shades. He has this season raised a number of seedlings from the autumn-blooming having been impregnated with the spring-blooming; the latter he had forced into bloom in order to obtain the pollen. Next year he expects to have a number of them in bloom. and hopes to possess the autumn-bloomers having the colours of the spring-flowering.

THE PLEASURE-GROUND.

(Continued from p. 232.)

THE representation of flowers is the proper style of drawing for the softer sex. A pursuit of this nature is the peculiar province of the FAIR, and the nearer their imitation approaches to nature, the more it delights us. The beauty and grace that may be displayed in grouping flowers, united with the gaiety of their colours and the harmony of their tints, are well worthy the attention of those who were born to render life delightful. The neatness, nicety, and patience required in finishing flower-pieces, seem to demand the delicate hand of a female artist.

The description, by Moses, of the garden of Eden, the first abode of first created man, formed the outlines which Milton has so splendidly enriched with all the imagery of poetry. From this have been copied the plantation, the park, and shrubbery, so justly the pride of the nation, and so properly the abode of its beauty. The Greeks devoted their terrestrial groves, as well as their celestial gardens, to their gods; and the Mahometans reserve their flowery lawns and umbrageous bowers for scenes of future bliss to mortal believers. We, however, collect all such blessings, which bounteous nature has scattered over the globe, and in this present life forms a modern garden, worthy of our admiration, and deserving of our care.

Some of the pleasure gardens of antiquity were created for, and devoted to, the pleasure of the softer sex. Solomon has celebrated those of Jerusalem in song, and the extraordinary gardens of Babylon appear to have been formed by Nebuchadnezzar for his Queen.

The Romans, in our own country, used to attach a pleasure-garden to their villa, and even to the convents and monasteries.

The citizens of London had gardens to their villas as early as the time of Henry II., which Fitz-Stephen tell us were, “large, beautiful, and planted with trees.” In Cerceau’s Architecture, which appeared in the reign of Henry III., every ground-plot was laid out with plans of labyrinths and parterres.

The royal gardens of Nonsuch, in Surrey, were formed in the time

of Henry VIII. The privy gardens of that palace were planted with flowering shrubs and fruit trees, and ornamented with basins of marble, fountains, and pyramids. The gardens of Hampton Court were also planted about the same period, by Cardinal Wolsey; and from that time to the present, the taste for ornamental trees and shrubs have continued to increase.

Charles II. returned from the continent with a taste completely French; Evelyn also, from his travels through France and Italy, during the Commonwealth, imbibed similar ideas. Thus our plantations at that time consisted entirely of long, dull avenues, and our pleasure gardens of clipped hedges, walks laid out upon geometrical principles, and evergreen trees shorn into fanciful and ridiculous figures. Le Notre who planned the celebrated gardens of Versailles, came over at this time to England, by desire of Charles, to plant the parks of Greenwich and St. James's.

Early in the eighteenth century, the formal and heavy style of gardening which had for some time prevailed, was changed by the united efforts of the English poets and painters of the day. By their pure taste and united efforts, they gave birth to that classical style of planting which has since been so much admired and imitated throughout the most refined parts of Europe.

Whilst Addison was forming a rural garden at his retirement at Bilton, near Rugby, Pope was employed in laying out a picturesque plantation at Twickenham. At the same time, with their pens they engaged in open war against the right angles and disfiguring shears of the gardeners of their day, against whom they levelled some of the keenest shafts of their ridicule. These geniuses were seconded by Kent, who as a painter and architect, was adapted to embody their imaginations. In his capacity of landscape planter, he laid out the grounds of Claremont and Esher, about the year 1730; and as he painted the hall at Stowe, it is probable that he assisted Lord Cobham in the grouping of his plantations also, which had been commenced on the modern land about the time Pope was forming the gardens at Twickenham.

We are informed by ancient historians that the Persians of old had parks, which contained animals of the chase; and the Romans had similar enclosures for the same purpose. It is generally supposed, that the park at Blenheim is the site of grounds that were once used by that people for hunting. It is also conjectured to be the same spot which formed the park of Henry I., who we are told had a park at Woodstock.

It will be necessary now to make some observations on the formation and planting of the pleasure-ground, and remark upon what trees assimilate best in neighbourhood. The style of this sort of garden must depend so much on the extent, situation, and character of the ground, that it would be absurd to offer more than general remarks.

The plantation should be carefully made to suit the building it is to surround. As the villa and ornamental cottage form the largest portion at present of edifices that claim a pleasure-garden, we shall confine our observations to the grounds attached to these dwellings. As such houses are generally built on situations too flat to admit of much variety,

the first study should be to find how and where we can break the level by throwing up elevations, so as to answer the double purpose of obscuring private walks, and screening other parts from the wind.

(*To be continued.*)

TREATMENT OF BORONIAS.

BY THE FOREMAN OF A LONDON NURSERY.

THE Boronias are very neat growing greenhouse shrubs, and worth every attention to grow them successfully. No doubt many readers of this Magazine will be acquainted with the circumstance, "that plants of this genus are very liable to die off suddenly."

This failure arises from improper management, and not from any predisposition in the plant. By the following mode of treatment, they will flourish to any desired age or size. I have raised and grown thousands of them, with perfect success.

To begin with *young plants*, I must remark,—take care not to *over-pot* such. Such as are just struck, pot into *small sixties*; when tolerably well rooted in them, repot into *large sixties*. Do not repot later than September, better keep them in the small sixties till March, than repot late in Autumn.

Always have *clean pots*, and if new ones, let them be soaked in water a day before using, and then well dried before used in potting; never neglect this attention. Particular care must also be paid to have a *liberal drainage*, the pot must have about one-fourth filled with broken pot, over which must be a layer of moss, to prevent the compost being washed among the broken pot, and so choked as to prevent the water duly passing away, and causing the compost to become soddened. The compost should be good turfy sandy peat, procured a few months before using and having been in a heap, turned and chopped a few times. To this add one-third of bits of charcoal, porous stones, brick, &c. The peat must be in a *rough and open state*, and these bits of charcoal, &c., be properly mixed up with it. Two circumstances contribute to the sudden death of a plant. If the soil becomes *soddened*, the excess of water for only a few times, will destroy the plant. On the contrary, if the plant *flags* a few times for want of water, it will soon perish. Being liable to these casualties, care must be taken to have a good drainage, and an open compost to grow in. The porous bits of charcoal, stone, and brick, absorb and *retain* a quantity of the water given, and the roots obtain a due supply of moisture therefrom, when even the peat may have become quite dry. Never allow the surface of the compost in the pot, to become *hollow* around the stem of the plant, or too much water will sink there, and in a short time the plant will perish. Soft water is essential, and in the Spring, when the plants have begun to push, once a week give a watering of weakish liquid manure. Whenever the roots appear in a mass at the outside of the ball, which will be seen by turning out carefully, then repot into a size larger, or with vigorous plants two sizes. I repeat, "*guard* against overpotting, and have an open compost and drainage, then the plants will flourish, having a due supply of water." In hot weather they like

a syringing over head, just after the sun disappears from them. Get the new shoots well ripened before winter, then a profuse bloom will be obtained. In order to keep a plant bushy, stop the leading shoots. The plant bears having the shoots cut back, to form it anew. Young half-ripened shoots, two inches long, strike freely in silver sand.

THE BEAUTY OF CLIMBING PLANTS, IN THE PLEASURE GROUND, OR FLOWER GARDEN.

BY A COUNTRY CURATE.

Of the numerous forms and modes of growth which plants exhibit, the climbing or twining habit appears to be the most graceful and interesting. As man is accustomed to regard more tenderly and fervently such objects as depend upon, or, as it were, cling to him for protection and support; so, in the vegetable world, those plants appear to excite the greatest interest which require the assistance of their more robust neighbours to maintain them in their needful position, and uphold them from grovelling prostration. There is, however, a general gracefulness and beauty in the plants of this class, and I have always observed that climbing plants are acknowledged favourites with persons of refined taste and sensitive minds.

Their sprightly and elegant disposition, the enchanting irregularity and negligence with which their branches are arranged and entangled, and the beautiful manner in which the extremities of these protrude, so as best to exhibit their varied blossoms, each contribute to heighten their attractions. I now allude chiefly to their appearance in a natural state, for when subjected to the operations of training and pruning, it deprives them of much of that pleasing simplicity which otherwise characterizes them.

It is to be regretted that many kinds of vigorous growing plants are trained to walls and trellises which ought not to be substituted for that which nature teaches us is the most graceful and ornamental with them, and by far the best adapted to the purpose of displaying their peculiar habits and beauties by supporting them by poles. There are others of a more delicate habit which look more ornamental, and exhibit their blossoms more to view, such as the delicate *Tropæolums*, &c. The natural habit of every plant ought to be allowed, if to have it in perfection, only to accommodate it so as to be kept in those bounds which other circumstances point out as necessary.

The natural habitats of all our general climbing plants I cannot describe, but most of the readers of the *CABINET* have witnessed the common honeysuckle, twining closely around the stems of trees, and often interweaving its slender branches with those of the tree to which it clings for support. Those plants which have not the advantage of trees, will attach themselves to the nearest shrub, and there exhibit their beautiful flowers among the branches, or if not thus privileged, will trail along the ground. So far as their general mode of growth is concerned, this may be considered a fair type of most climbing plants; all are incapable

of supporting themselves in an erect position, and consequently, are not frequently met with, except where trees or shrubs exist or abound.

These circumstances very naturally suggest the idea of encouraging them to ascend poles when in a state of cultivation. And though it might be supposed that similar plants require a shaded situation: this is not always the case, at least with those from temperate climates. For although found growing naturally beneath the shade of trees and shrubs, they are always seen struggling to obtain an exposure, and either protrude their shoots through the opening branches, or rise above the summits of their supporters.

Climbing plants of the honeysuckle tribe are best adapted for planting at the base of small trees in a conspicuous place in the shrubbery, and to these they may be allowed to attach themselves; or, if necessary, can be secured erect till they have embraced them sufficiently to render further attention needless. It is particularly advisable to permit them to commence twining themselves; as many of them grow in a peculiar direction, which, if altered, would considerably retard their progress and detract from their beauty. No just conception can be formed of the great additional charms they would impart to the shrubbery; for when they had become firmly established, and had grown to their natural size, the trees or shrubs would be seen covered with an extensive variety of showy flowers, and present an appearance at once beautiful and interesting. The usual sheltered situation of shrubberies, or the protection which the shrubs themselves would afford, render it probable that many half-hardy climbers (and now we have many new and beautiful ones,) too might be grown within their boundary, provided the mode of growth were congenial to their habits; and even with no other variety than the hardy species of Clematis, &c. presents, these departments might be converted into decided and lasting attractions.

There is another description of climbing plants, however, which from their natural disposition to branch, or in which such a tendency may be readily induced by pruning, possess peculiar adaptations for training to detached poles; and it is to these species, and the mode of supporting them, that I am desirous more especially to call attention. No person, but who has seen this system successfully practised, can possibly have any idea of the effect which a *pillar of roses*, or similar plants produces, when all their branches are bending to the earth, as it were, beneath the weight of the multitudes of flowers with which they are laden. And when poles are placed at a convenient distance apart, so as to have *festooned cords* to which the shoots are trained, the pendant shoots in profuse bloom, give to the uprights an additional interest.

Their appearance, whether in the flower bed, around a flower garden, in the lawn, or whether arranged opposite each other on either side of a portico, an entrance, or a walk, or disposed solitarily and irregularly over any part of the pleasure-ground, is most interesting. Roses thus treated, have all the concentrated beauty of the head of a standard elongated into a pillar, without any of the formality of its summit, or the bareness of its stem. When growing climbing roses to poles, &c., it is necessary that a situation be chosen for planting them where they will be *slightly sheltered from winds*; but at the same time not to

screen them from the full influences of the sun, otherwise their shoots will be very liable to suffer from cold during the winter, on account of not being *thoroughly matured*. A strong loamy soil is the best for growing them in, so as to flourish luxuriantly.

Poles of the requisite size and strength may be easily procured from the thinnings of larch plantations, and they will stand for many years without renewal. It is best to leave some of the branches about six inches long, as they will prevent the wind twisting the shoots around the pole so as to damage them. The bark should not be removed; both for durability and appearance, it is far preferable to allow it to remain. Care should be taken to apportion the length and strength of the poles to the estimated height of the plant, for they will look exceedingly clumsy and unsightly if too large or too long, and the habit of the plant should be known. Some of the hardy Passion Flowers, *Glycine sinensis*, *Bignonias*, *Solanums*, *Fuchsias*, *Clematis*, *Cotoneasters*, *Pyrus*, *Pyracantha*, *Ribes speciosum*, the *Fuchsia* flowered, and in a warm situation, the *Eccremocarpus*, *Tropæolum pentaphyllum*, and for Summer only, *T. Lobbianum*, *T. Canariense*, &c., are most interesting when trained as above, and make a splendid display when attached to a pole; most require to be freely pruned, as it is by close pruning that they can be induced to flower freely.

REVIEW.

The Beauty of Flowers in Field and Wood, containing the Natural Orders or Families of British Wild Plants, with their Moral Teachings, Illustrated. Designed to make Botany simple, and Field and Wood Rambles instructive and agreeable. By John Theodore Barker. Bath, Binns and Goodwin. London, Whittaker and Co. Edinburgh, Oliver and Boyd.

To the reflecting mind, the distribution of flowers over the surface of the whole earth, their spontaneous growth on the mountains, in the vallies, o'er the plains, the rugged rocks, the fields, woods, and hedge-row sides, as well as in the cultured ground, are full of interest. Who can look upon a flower, examine its perfection of structure, notice minutely its parts and elegance of form, its diversity of colours, but must be filled with admiration, and if flowers are not exactly to minister to man's actual wants, yet he will feel assured that they were so variously formed, and profusely scattered, to add to his delight by beautifying the world.

How pleasing and instructive to ramble amidst such charms, deriving both pleasure and profit thereby, and Mr. Barker has, in his elegant well written book, provided the most pleasing British floral companion that we have ever had, and we respectfully recommend an early acquaintance there with by all our readers. The work is in Crown 8vo., and contains 260 pages; with ten coloured Plates, illustrative of the various parts of plants, flowers, and foliage. The style of the subjects treated upon is distinguished by clearness and simplicity. The plants are described according to the NATURAL SYSTEM OF CLASSIFICATION, which

system is,—1st. Briefly explained. 2ndly. Method of classifying Plants into Families, &c., detailed. 3rdly. A concise description of the *Families*, *Species*, and *Varieties* of our most interesting British wild plants is given. The entire is written in an agreeable and useful style, and all the most interesting families of plants are illustrated by some extracts of beautiful and appropriate Poetry.

MISCELLANEOUS SECTION.

HIMALAYA AND THIBET.—The Valley of Cashmere, by some thought to have been the site of the Garden of Eden, hardly realised to Dr. Thomson the expectation which previous accounts had led him to entertain.

“ My first visit was to the lake, and to the celebrated gardens on its northern shore, which were the delight of the emperors who made Kashmir their retreat from the heat and cares of Delhi and Lahore. The southern part of the lake is very shallow, and I sailed along narrow channels, which separated large patches of tall reeds, among which a very narrow-leaved Typha and an Arundo were the commonest plants. Three or four species of Potamogeton were abundant in the lake, just coming into flower, but most of the water-plants were only beginning to vegetate. I saw three or four flowers of a Water-Lily (*Nymphaea alba*), and could just recognise Villarsia nymphaeoides, Menyanthes trifoliata and Trapa, all of which had been recorded by previous travellers as natives of Kashmir. I looked anxiously for Nelumbium, but saw no signs of it, except the withered capsules of the previous year, many of which I observed floating on the lake.

“ The gardens of Shalimar and of Dilawer Khan rise in a succession of terraces from the margin of the lake. They are laid out in a stiff formal style, straight walks crossing one another at right angles, and are irrigated by means of straight water-courses, branching from a long canal which passes down the centre, through a succession of ponds well built in masonry, and provided with artificial fountains, which are made to play on festivals and holidays. Pavilions of fine marble occupy the intersections of the principal walks. Magnificent plane-trees form the chief ornament of these gardens, which are now much neglected; straggling bushes and a wilderness of weeds occupying all the less conspicuous parts, while the main avenues alone are kept a little neat.

“ Although the chief beauty of the valley of Kashmir is undoubtedly the magnificent girdle of snowy mountains by which it is surrounded, the orchards and gardens, which are still numerous in the neighbourhood of the capital, are charming spots, and the more so from the contrast which they present with the barrenness of the surrounding country, and the absolute ugliness of the swamps in the centre of the valley. Nor should it be forgotten, when we compare the accounts given by early travellers with the impressions made upon us by the present appearance of the valley, that Kashmir is no longer in the same state as it was in the days of the emperors; a long continuance of misrule, under a succession of governors, whose only interest it has been to extract as much

revenue as possible from the unfortunate inhabitants, having produced the only conceivable result, in abandoned cultivation, a diminished revenue, and an impoverished people."

The Valley of the Chenab was very different.

"From the great elevation of the mountains which I had just crossed, I was prepared to find a marked change in the aspect of the vegetation, and I was not disappointed. The steep slopes were covered with a most luxuriant herbage, about two feet in height. A tall paniced Rheum was very common, and numerous Umbelliferae, Silene inflata, Geranium, and Pteris aquilina were abundant. The most remarkable plant, however, from the ~~extreme~~ quantity in which it occurred, was an Asphodelaceous plant (Eremurus, Bieb.), the long scapes of which, from four to five feet in height, covered the hill-sides in countless myriads. These scapes were clothed, for nearly half their length, with a profusion of elegant white flowers, very slightly tinged with a pale yellowish green. I met, during the day, with ~~most~~ of the characteristic plants of the Kunawar flora; as instances, I may mention Ephedra, Dictamnus, Rosa Webbiana, Dianthus, and Scutellaria orientalis. The arboreous vegetation was much the same as on the other side of the pass. The right side of the ravine was well clothed with Pines, of all the four ordinary species; the left side was usually bare, the northern faces of the spurs, which are generally wooded, being too precipitous, but in the hollows there were a few small clumps of trees, principally Pine, Walnut, and Sycamore."—(*Western Himalaya and Tibet; a Narrative of a Journey through the Mountains of Northern India.* By T. Thomson, M.D.)

THE MANETTI ROSE-STOCK.—It is asked if Roses worked upon this stock die off after three or four years' growth? I have now used the Manetti stock for at least seven years, and after I had once began to send out plants upon it, my customers (or at least those of them who had a sample) would never take plants upon the Briar. I have now fine large bushes on the Manetti, at least five or six years old, which are as healthy and vigorous as they were the first season, and which form a fine contrast (on a border of specimens) with the majority which are on Briars, and some of which are annually dying, and others monthly choked with suckers. One of the best properties of the Manetti stock is the freedom with which it swells annually with the growth of the bud. As a pot stock it is invaluable; it makes such fine fibrous roots, and is so clear of suckers; and in pots it may be "worked" 10 months out of the 12. I have formerly said a good deal in favour of this stock, and now, after seven years' experience, I think more highly of it than ever.—*Thomas Appleby, York, Gardener's Chronicle.*

ON THE PERIODICAL EMISSION OF THE ODOURS OF PLANTS.—It is a well-known fact that many plants give off the most powerful perfume in the evening and night-time. This phenomenon has been attributed to various physical causes, arising out of peculiar conditions of the atmosphere, &c.; but little is known on the subject, and some observations, published several years ago by Professor Morren, seem strongly opposed to any physical explanation of the facts. It had been supposed that flowers merely gave out the more powerful odour at night on account of the volatile perfume being less quickly dissipated at that time than

when the sun was above the horizon. It was also a question whether the condensation of the atmosphere during the night might not be the cause of the increased power of the scent. *Orchis bifolia* occurs abundantly about Liege in spring, and its white flowers, which are quite scentless during the day, give out a pleasant, penetrating aroma in the evening, and especially about eleven o'clock at night. Professor Morren convinced himself by five days' observation that the perfume began to be manifested at twilight, exhibited the greatest energy at the time when the darkness of night prevailed, and decreased with the dawn. Two spikes of flowers of this orchis were placed in two cylindrical glasses filled with water, in which the plants were totally submerged. One glass was placed so that the sun might shine upon it all day, the other was kept in the shade. Any scent emitted from these flowers could only be perceived through the water by which they were covered. As evening came on a delicious aroma became evident, and was emitted throughout the night, being lost at sunrise. This proves, says Professor Morren, that the condensation of the vapour has not the slightest influence upon the perception of the odoriferous constituents by our senses. It further proves, in regard to the plants exposed to the air, that neither the evaporation of the particles nor the accumulation of them on the parts of the plant where they have their origin is the cause of the periodical absence and recurrence of this exhalation; so that the explanation of this phenomenon must undoubtedly be sought in physiological facts.

Professor Morren made another experiment. The blossom of *Maxillaria aromatica* is well known for its strong odour of cinnamon, so that two or three flowers will scent a whole conservatory. And it is well known that in the fertilization of the orchideæ the deposition of the pollen on the stigmata is effected very quickly, that the pollen-tubes elongate in less than one hour, the flowers and the perianth begin to close, and the columella shoots up. In a plant bearing many flowers, examined by Professor Morren, the scent was strong, penetrating, agreeable, and resembling fine cinnamon. The unfertilized flower retained this odour day and night, morning and evening, for eight days. Each flower that was fertilized by Professor Morren lost its odour in half-an-hour after the operation, and never gave further signs of it. This fact seems alone sufficient to prove that the emission of the odour is a vital phenomenon.—*Magazine of Botany.*

GROUPING TREES IN PARKS.—The late Mr. Gilpin had a very good plan of forming groups in parks; he first determined on the positions where two, three, or more would be effective, and not far from each other; he planted these with trees of the desired kind, and of a permanent character, and then enclosed a rectangular figure around them, filling up all the intervals with trees of very rapid growth, and with Gorse, Broom, &c., as nurses.

THE DEODAR.—Not being aware that the Deodar has fruited in this country prior to this date, I have thought it might be interesting to know that a fine tree of this beautiful Conifer, twenty-eight feet high by twenty-three feet through, is producing abundance of cones here at the present time.—*T. R., Bury Hill, near Dorking.*



FLORAL

OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

HOLLYHOCKS.—*Now* make new plantations of these noble flowers. Auriculas and Polyanthuses, Carnations, Pinks, &c., should be placed in their winter quarters, in a dry, sunny, sheltered spot, but, at the same time, where a free circulation of air can be admitted on all proper occasions. The surface soil must be loosened, and a slight sprinkling of fresh compost be spread over it. Any plants out in the open beds, as Lobelias, &c., should be taken up and potted, for winter preservation, in pits, frames, &c. Chrysanthemums grown in the open ground, and required for blooming in-doors, should be taken up as entire as possible, and be potted with due care. All tender kinds of plants, as Scarlet Geraniums, Verbenas, in fact every kind requiring winter protection, should be housed *immediately*; it is bad policy to put it off a single day longer. Already we have had strong frost, which has injured the tender things in some places. All plants like light; place them as near to the glass as convenience will allow. Tender Roses, grown out-of-doors, should have protection over the roots, &c., or be taken up and housed. Prepare the Tulip-bed.

DAHLIAS.—Let the *crown* of the roots be covered with a few inches deep of soil around the stems. Beds of Pansies may be made. Shrubs of all kinds may be planted. Roses now planted soon **PUSH NEW** ROOTS, and become well established before winter; the soil being somewhat warm, excites the roots immediately. Pinks, also, may be planted in beds.

SHRUBS, &c., FORCING FOR WINTER BLOOM.—Such as are to bloom early should be gradually prepared, potted immediately, if required, and by the middle of the month introduce such as are desired to bloom by Christmas into the house or pit. The kinds which are well deserving such attention are Roses, Honeysuckles, Jasmines, Poinsettias, Azaleas, Kalmias, Persian Lilacs, Andromedas, Tree Carnations, Pinks (of which Anne Boleyn is the best), Rhododendrons, Rhodoras, Deutzias, Ribes, Spirea prunifolia, Mezereums, Gardenias, Cupheas, Heliotropes (the new blue is fine), Scarlet Pelargoniums, Cactuses, Eranthemums, Justicias, Salvias, Gesnerias, Correas, Chinese Primroses, Aconites, Mignonette, Primroses, Cinerarias, Stocks, Persian Iris, Crocuses, Cyclamens, Sweet Violets, Hyacinths, Lilies of the Valley, &c. Seeds of many annuals should now be sown in the border, and others in pots; such will bloom early next spring. Brachycoma, Schizanthus retusus and Hookerii, Rhodanthe, and Salpiglossis, seeds now sown, plants potted off when strong enough, will bloom vigorously next spring.

IN THE GREENHOUSE, &c.

If the stock is not housed, it ought to be done immediately. Care must be taken so that one plant may receive something like its proper treatment without interfering materially with the well-being of its neighbours; and the tender ones must be placed in the best part, for protection from cold wind, &c., as Polygalas, Pimeleas, Leschenaultias, Aphelexis, Boroneas, Gompholobiums, and Diosmas, are injured by being placed where there is a *current* of wind. Let each plant have all the space possible, and the robust large-leaved kinds, and the very slender delicate sorts, should be kept as separate as can be arranged, so as to allow a due circulation of air. Be careful that the pots, &c., be perfectly clean before arranged for their winter situation. Repot Cinerarias, &c. Let Camellias which are to bloom early be placed in a warmer situation, also any Chinese or Indian Azaleas, so that they may be gradually advancing. In watering the stock of plants, let it be done in the *early part* of the day, so that any excess may be dried up before evening, and damps be avoided, otherwise mouldiness will ensue. Thin away the flower-buds of Chrysanthemums; water occasionally with liquid manure. Calceolarias strike root freely; now pot off seedlings to bloom next season.

PELARGONIUMS.—The plants headed down some weeks back, now have pushed shoots an inch or two long; these should be thinned properly. The plants must be repotted, in order to have the roots well established before winter. Shake off the soil, and shorten some of the long roots, so that young fibres be promoted, which is essential to the vigour of next bloom. Have a free drainage in the pots. If a compost such as is recommended by Mr. Cock in a former number is not possessed, then take turfy-loam well chopped up, with an equal portion of sandy-peat and well-rotted leaf-mould, and half the quantity of well-rotted dung. Give air to the plants in the day-time, and be careful not to give over-much water at the roots, for if saturated they will be injured. Young struck plants should have the tops pinched off, to cause the production of side-shoots, to render them bushy for next season. Repot some of the **SCARLET GERANIUMS** (so called) to bloom during the autumn and winter; they are charming ornaments. So with the *new Tree Carnations*, of which there now are many very beautiful distinct varieties.

BRIEF REMARKS.

SUCCESSFUL TREATMENT OF GLOXINIAS.—Towards the end of February, turn the bulb out of its pot, and shake off all the old soil, cutting away, too, the old dead roots, and then repot it in a light rich compost, having a free drainage. Now place it in a *gentle heat*, and keep it *just moist enough* to excite growth. If only one shoot is produced, it should be stopped when an inch or two in height, leaving a pair of leaves only on it. At the base of these two leaves there are buds, and these buds will soon break and produce two more shoots when these have grown two leaves each; then repot the plant into a pot two sizes larger, and tie out the two shoots a little distance from each other. Nurse the plant carefully with water, but do not deluge it, and place it as near the glass as may be safe from cold. When a third pair of leaves are produced, nip out again the buds at the top of the

two shoots, and allow two more shoots to grow to each, till each has two more leaves upon it; then repot again into a pot two sizes larger; this will be a sufficient shift for the first season, and the plant so grown will produce four spikes of fine bloom. If the bulbs are larger, they may probably send forth four or five shoots; then repot, tie them out, nip off the tops, and by that means double the number of flower spikes. The great point is to keep the plants from flowering, by inducing free growth and fine foliage, before the flowers are allowed to appear. The larger the bulbs (and they will become larger every year), the greater the strength and number of the flowers produced. Perhaps there are no plants that ought to have their leaves kept more moist than Gloxinias. I syringe them three or four times a day with the greatest success and most perfect safety. The leaves prevent too much water penetrating to the roots, or this excessive watering with the syringe will be injurious instead of beneficial. When the bulb pushes up too many shoots, thin them, so that the strongest plant should not have more than five or six of these shoots left on it to bear flowers; those left should be tied out almost horizontally, leaving out one or two in the centre, to fill up the vacancy. When the plants are in flower, the syringing must of necessity be discontinued, or else it will injure the bloom.—*An Extensive Cultivator.*

CULTIVATION OF THE POLYANTHUS.—Complaints have often been made relative to the failure in cultivating these lovely flowering plants. A writer in the *Midland Florist*, who has long grown them most successfully *out of pots*, has given the particulars of his mode of treatment, from which we extract the following —“Select a spot open to the sun throughout the winter, and free from overhanging and drip of trees; mark two feet in width, any length required, allowing eighteen or twenty inches for path—one end of the bed to point east, inclining a little south, the other end will be, of course, west, the same inclination north, which will give the required aspect. Measure the length marked out, and procure some fir poles, four inches thick and five feet long; have them sawn down the middle, and thus each will make two posts, one of which will be required to every three feet your bed is in length, and one over. Provide also some strips of red deal, one inch thick and two broad, for edging the bed in front and at both ends; and a few stakes, one foot long and two inches thick, to be driven down about three feet distant, to the extent of the bed, and the strips nailed on outside, next the path; also four pantile laths, the full length required from end to end. If the ends of the posts, stakes, and strips of deal are brushed over with hot gas tar, mixed with one-fourth of linseed oil, a few days previous to being put down, they will last much longer. All being in readiness, stretch a line, three feet six inches high, from end to end, to the extent of the back or south side of the bed; then put down the posts, till the tops are even with the line, and fasten them firmly; then nail thereon the pantile laths, commencing six inches from the surface of the bed for the first, and the rest following with equal space to the top. Dig out all the soil a foot deep, clear and regular, and put in a layer of any decayed vegetable refuse, such as hedge clippings, rotten sticks, or the like, that will admit of pressing down equally all over with the back of the spade, till about three inches thick. Upon this a moderate quantity of soot should be sprinkled regularly all over with the hand; then a stratum of well-decayed cow or pig manure, the same thickness as the vegetable refuse. This also must be sprinkled with soot, but very slightly, or it will injure the plants. It is to prevent worms rising, which often make sad havoc in a newly-planted bed, by rooting up the plants and dragging them into their holes. If on cold clay land, use sheep manure, mixed with one-fourth of sandy-turf. Fill up the bed to within an inch of the top edge of the strips (which may now be put down for border or edging for the bed) with fresh fibrous loam that will easily divide with the fork or hand; then rake all over carefully, and put on a riddling of nice light soil, free from manure, one inch thick. This completes the bed ready for planting.

“Some good strong plants of the double-flowering Currant, planted at the back or south sides of the laths, two feet distant, blooming with the Polyanthus, adds much to the beauty of this early ‘treat,’ affords good shade in summer, and, losing its foliage in winter, gives access to the sun’s rays, and is in all respects the best thing I know of for the purpose.”

THE DAHLIA.—Having been a very successful cultivator and exhibitor of this fine autumn flower for several years, and the size of my blooms generally having

attracted much notice, I beg to offer a few brief remarks upon its culture, more especially as respects watering. I have tried all kinds of manure water, likewise guano, but I have found nothing as yet equal to soot-water and soap-suds. It is a general rule with most growers to place half-rotten manure round the roots, and then draw the earth up so as to form a basin, a practice which is greatly required; but there is an evil attending it, for oftentimes when the roots are taken up to be stored, they are found to be very much cankered or warty, and hundreds of worms are also discovered there. By watering with soot-water and soap-suds the roots will be perfectly clean and free from all insects, and much larger flowers may be expected. The most successful traps for earwigs I have found to be the bloom-stalks of Hog-weed, or Rhubarb, &c., dipped in milk, to soften the pith, which earwigs are particularly fond of; blowing them out of the stems into a bottle, and pouring scalding water on them, is the quickest way to dispose of so great an enemy.—*E. Bennett, Perdiswell.*

DESTROYING RED SPIDER.—As an original subscriber to your Magazine, which has done so much to stimulate the love of gardening and flowers, may I take the liberty of asking information of you on a single point? In your number for August, in specifying a recipe for destruction of the *red spider*, that inveterate pest, you mention lime and sulphur, mixed, as an effectual application. Will you kindly inform me in what proportions the lime and sulphur should be used; for instance, to 1 lb. of lime how much sulphur; and how much of each for a greenhouse thirty feet in length? May all the plants be left in a greenhouse, during the smoking, with impunity?—*Wm. Martin, Paisley.*

[Sulphur may be mixed with lime (or any similar material) and water, and any part of a plant-house, or plant, be smeared over with the mixture, but it will not affect the red spider or other insect, unless such a degree of heat act upon the sulphur as to produce a gaseous volatile fume therefrom; it is the fume that destroys the insect. When sulphur burns, its fumes are, in proportion to heat and quantity, powerful, and will not only destroy animal life but vegetable too. When sulphur is exposed to a temperature of 302°, it will spontaneously ignite, and at higher degrees the fumes will ignite also. But whilst there is danger in using it, it can be so regulated as to be effectual in the case of insects, and the plants be preserved from injury. For many years we have known the following plan to be most successful every way:—To one gallon of rain or pond-water, one pound of the flour of sulphur, and as much quick-lime in a powdered state added as will make the mixture of the consistency desired to paint or smear over the flue or hot-water pipes, &c. The fire flue is always hottest nearest the fire, and to a few yards of that part the mixture is not applied. Sulphur fuses or melts, but does not burn, at the heat of 220°, but at that heat the fumes, whilst it killed the insects, would be too strong for the foliage of plants. It is only necessary to have the flue at from 160° to 170° of warmth; this would produce a fume quite powerful enough, but would not injure the plants, unless it was some very delicate young foliage. To save such things, the plants might be removed, and, if they suffered from the red spider, place them where the fumes are the weakest, and the lower in the house the weaker they are. With hot-water pipes, avoid smearing over with the mixture about two yards nearest to the boiler; beyond that the pipe will scarcely ever be as high as 200°.

The red spider will generally, at periods, retire into crevices or holes in the materials of the house; it is advisable once a-year, say before housing the plants in autumn, to clear the house of all plants, close it up as much as possible, and then fume the house as powerfully as you please, and all the secluded insects will generally be destroyed; and attention to this will often save the plants afterwards introduced from the destructive pest.]

MOTION IN PLANTS.—Without attempting to enter on the difficult question of "spontaneous motion," or the difference between vegetable and animal life, it may be remarked that if nature had endowed us with a microscopic power of vision, and if the integuments of plants had been perfectly transparent, the vegetable kingdom would be far from presenting to us that aspect of immobility and repose which our perceptions now ascribe to it. The internal parts of the cellular structure are incessantly animated by the most various currents, ascending and descending, rotating, ramifying, and continually changing their direction; they manifest themselves by the movements of a granular mucilaginous fluid in water plants (*Naiades*, *Characeæ*,

Hydrocharidææ), and in the hairs of phænogamous land plants. Such is the peculiar molecular movement discovered by the great botanist Robert Brown (which is indeed perceptible, not only in vegetables, but also in all matters reduced to an extreme state of division); such is the gyratory current (cyclose) of globules of cambium; and, lastly, such are the articulated filamentary cells which unroll themselves in the antherides of the chara, and in the reproductive organs of liverworts and algae, and in which Meyen (too early lost to science!) believed that he recognized an analogy to the spermatozoa of the animal kingdom. If we add to these various currents and molecular agitations the phenomena of endosmosis, the processes of nutrition and of growth, and internal currents of air, or gases, we shall have some idea of the powers which, almost unknown to us, are incessantly in action in the apparently still life of the vegetable kingdom.—*Humboldt's Cosmos.*

BEGONIA PRESTONIENSIS.—Messrs. Lucombe and Pince's advertisement reminds me of an opinion I was led to form on receiving from them lately fine specimens of the above-named plant, that Begonias must soon become as popular as Achimenes, Gloxinias, and the like, now that the process of hybridization has been so successfully brought to bear upon them. You will, perhaps, allow me to mention, for the information of those who have not seen it, that this *B. Prestonensis* is probably the handsomest of the Begonias—certainly one of the most brilliant; so that it must become a popular plant. It is said to come from *B. cinnabarina*, crossed with *B. nitida*, and unites with foliage and flowers very much like those of the former the shrubby character of the latter, so far modified as to be literally of a neat branched habit of growth; the leaves are obliquely ovate-acuminate, slightly lobed, and doubly-serrate on the margin, and the flowers come along the branches in axillary trichotomous cymes, elevated on long red peduncles above the dark green leaves. These flowers (male four-petalled, female five-petalled) are, perhaps, rather smaller than in *B. cinnabarina*, but brighter coloured, and they have unquestionably a very pleasant Rose-like odour, which was discoverable after a long railway journey.—*T. Moore. Gardeners' Chronicle.*

NOTES UPON THE TULIP DURING THE SEASON OF 1852.—Many excellent articles upon the Tulip have been sent us by Mr. Slater, and appeared in previous volumes of the FLORICULTURAL CABINET. The following notes he gives in the *Floricultural Review*, of which publication he is the editor. The true character of each flower, as given by Mr. Slater, may be fully relied on:—

"The Tulip season of 1852 has been far short of an average one, as the blooms have not been in that fine state which many of us have seen; and the great preponderance of flamed flowers is a sure and certain criterion by which we may found our opinions. Feathered flowers are generally more abundant after a severe winter than when it is a mild one, and this is an effect for which we cannot account. There is no florists' flower so fickle and inconstant as the Tulip, and we are much in ignorance respecting it. Nature has her gambolling as well as mankind, but she is more sportive and frolicsome; we see her at one time in all her beauty, and again in her dishabille. The novelties of the season 1852 are not numerous, and we may just take a rapid review of what has come under our notice. A Feathered Byblomen from the neighbourhood of Leigh, name not known, was shown at the Northern Counties Tulip Meeting (not for competition), raised from Roi de Siam, which far eclipses any Feathered Byblomen in cultivation. Form and base unexceptionable, the feathering dark and bold, and the white ground clear and bright. This variety is said to be equally good when flamed, and, if so, the Maid of Orleans, or rather Princess Royal, must give place to one so much her superior in every point—form and pencilling particularly. We understand the stock consists of twelve roots. In introducing this variety, we have not done it in a whisper, as it was openly brought forward for all to see; and no one who has any taste for a Tulip will say that we have given it more praise and commendation than it deserves. Another novelty of a feathered rose was also in the winning pas at the same meeting, called Rosy Gem; and certainly, excepting one or two faults, it is a gem of the first water. Had it been placed for competition in the class, it would have been No. 1. The cup is rather long, and the base a little better than Lady Crewe. We feel no hesitation in stating that it is a seedling from Lady Crewe. It has all the parent's characteristics about it, but is a decided improvement upon it. It is said to have been raised from seed sown by the late distinguished amateur John Thackray, Esq., of Nottingham, formerly of Manchester

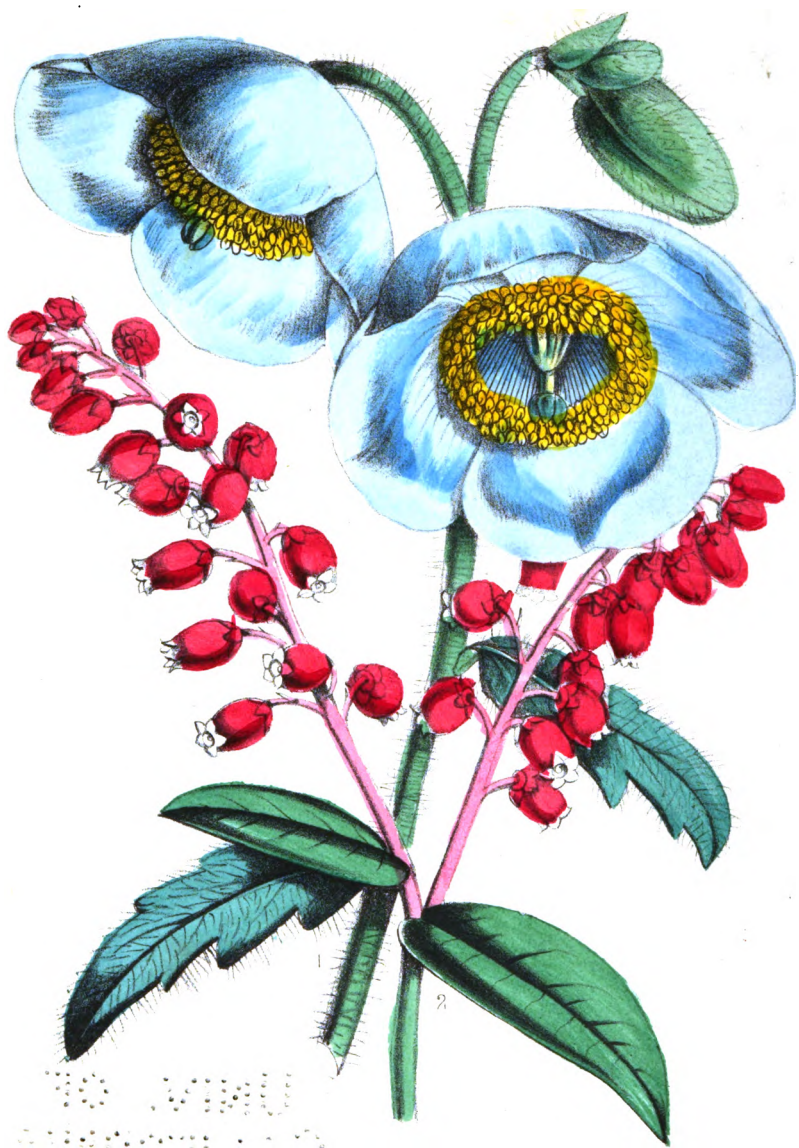
whose collection was disposed of a few years ago. Guido, a Feathered Byblomen, was shown by Mr. Bromley in his pan, and, although very pure, it did not appear to us likely to make a first-rate variety. It has all the faults of Edgar, only being pure. Violet Amiable was also brought for inspection in a much better state than usual. This seedling was raised by the late John Haigh, of Ashton-under-Lyne, near Manchester, and was sold at his sale to one individual. The cup is rather long, and the feathering is apt to skip at the top, similar to Ambassadeur d'Holland, but the white is extremely pure as respects the ground and base. The colour of the feathering is similar to Bienfait Incomparable, only a plated feather. It took the first prize in the class at the Oldham Floral and Horticultural Meeting, and very deservedly. Dixon's Bion has become a great favourite this season, from its coming so well in either a feathered or flamed state. We saw a flamed bloom which we considered ought to have been placed first in the class, instead of Unique. His Queen Eleanor, in the feathered class, was placed before Bion, but we prefer Bion to her majesty.

"Colbert, a fine rich yellow and black feather, took a fourth prize at Birmingham, and will please the most fastidious grower. Lady Clifton (the clipper) we have not seen; it has been submitted to the opinion of the editor of the *Florist*, who reports favourably of it. We should have had a *much better* opinion of it had a bloom been brought to the National Meeting; as there have been one flamed and two feathered bulbs sold out, besides what the raiser has in his collection, surely a bloom might have been spared for inspection. If it had not been in first-rate condition, allowances might have been made; but we doubt its form being good, for two reasons. The first is, that Triomphe Royale and Queen Boadicea are both long in the cup; secondly, we have taken seed for several years from Queen Boadicea, and we cannot say we have one but what is rather too long in the cup. Even Kate Connor has only one fault, a trifle too long in the cup, yet it is much better than nine out of ten that we have in the rose class at present. Had our friends seen a feathered bloom of Kate at G. W. Hardy, Esq.'s, of Warrington, there would not have been a whisper, but a *downright shout*. We wished to have brought the bloom to Birmingham, but the gentleman alluded to said it should remain in the bed to look at as long as it would stand. We have also seen three other blooms feathered, all good, and two of them won early in the class; and one that was flamed, but cut too young; had it been a matured bloom, we believe that there is not a rose Tulip in existence that could bear a comparison with it. The scarlet feathering is much richer than Dolittle or Queen Boadicea. We must be excused if we notice two which we have bloomed for the first time from Rose Breeder Gibbons, crossed with Catalina, both feathered, and first-rate in form and bottom. One we have named Dinah, and the other, which for brilliancy of the white cannot be excelled, called Modestina. Unfortunately the stock is small, only a few roots, as the seed was only sown six years ago. There was one characteristic about these varieties, they were not discoloured at the base. Probably this was owing to their being covered, so as to keep the sun and evening atmosphere from them, that they might remain a long time in bloom. Adonis, a seedling of our own, from Polyphemus, crossed with San Joe, bids fair to be in the foremost ranks, being large, well feathered, perfectly pure, and steady; Roderigo, also from the same sowing, bids fair to equal Adonis."—(*To be continued.*)

PROPAGATION OF HOLLYHOCKS.—The best blooming plants are raised from cuttings, which may be taken from the crown of the old root when the shoot is about an inch long, in the month of April or May; or by single eyes from wood shoots, in July and August, taking care the bark is sufficiently hard, but not pithy, or they are likely to rot.

The cuttings should be potted singly in small thumbs; the eyes placed five or six round a small sixty-sized pot, in a light and very sandy loam, plunged in a close frame (if available), with a little bottom heat, very sparingly watered, giving air every day for a short time, to exclude damp, and carefully picking off all decayed leaves. In about three weeks they will mostly be rooted, and should be immediately potted into thumbs or small 60's; when well established, they should be hardened off, and kept in a cold airy frame until they are transferred to the open ground for blooming.—*A Practitioner.*

UNIV. OF
CALIFORNIA



1. *Miconopseis Wallichii*
2. *Andromeda neruifolia*



1. MECONOPSIS WALLICHII. (PAPAVERACEÆ.)

THE generic name is derived from MEKON, a *poppy*, and OPSIS, *resemblance*, alluding to the appearance of the plants to the Poppy. Many of our readers know the yellow-flowered Welsh Poppy formerly called *Papaver Cambrica*; its name was changed to *Meconopsis Cambrica*, forming the first of a new genus. Of its former family much has been written, especially relative to the wild red Poppy of our corn-fields, and the common white-flowered, from which opium is extracted.

"From the Poppy I have ta'en
Mortal's balm, and mortal's bane!
Juice that creeping through the heart,
Deadens every sense of smart;
Doom'd to heal, or doom'd to kill,
Fraught with good, or fraught with ill."

Mrs. ROBINSON.

The Poppy, in floral language, is made the symbol of "consolation," in consequence of some of the plants affording a juice that will ease pains and procure sleep to the restless invalid.

The ancients thought the red Corn-Poppy so necessary for the prosperity of their corn, that the seeds of it were offered up in the sacred rites of Ceres, whose garland was formed with barley, or bearded-wheat, interwoven with poppies. An antique statue of this goddess, at the Louvre, at Paris, represents Ceres as holding poppies in her hand mixed with corn, as well as having them braided in the hair. And in the same collection, *Sabina* holds a cornucopia filled with pomegranates, grapes, and poppy-heads. Poppy seeds were frequently mixed in the food of the ancients, strewed over their bread, and also sent to table mixed with honey.

The Persians still continue to sprinkle the seeds of poppies on their rice and wheaten cakes, which is also practised in Germany, where the

seeds are given as a cooling diet to singing birds, and in England we use them for the same purpose, known under the German name of *maw-seed*.

"Sleep-bringing Poppy, by the plowmen late,
Not without cause, to Ceres consecrate :
For being *round* and *full* at his *half-birth*,
It signified the perfect orb of earth ;
And by his inequalities, when blowne,
The earth's low vales and higher hills were showne,
By multitude of grains it held within
Of men and beasts the number noted bin ;
Or cause that seede our elders used to eate,
With honey mixt (and was their aftermeate)."

The handsome *blue-flowered Poppy* (*Meconopsis Wallichii*), which we now figure, we saw in bloom in the Royal Gardens of Kew during the past season. Dr. Hooker discovered this beautiful species in Sikkim Himalaya, and sent seeds of it to the Royal Gardens, where, in pots in a frame, the plants were from two to three feet high. The flowers are produced in a long drooping raceme. It merits a place in every flower-garden, and being a perennial herbaceous plant, it is very likely to flourish in the open border.

2. *ANDROMEDA NERIIFOLIA*. The *Oleander-leaved*. "Synonyme, *Leucothoe Neriifolia*." It is a native of Brazil, and has been obtained by Mr. Cunningham, of the Comely Bank Nursery, Edinburgh. It is a neat, bushy, shrubby plant, and flourishes admirably in the greenhouse, and certainly is entitled to a place in every one. Like all the *Andromedas*, it succeeds best in light peat soil, with a free drainage. If it be exposed to the powerful effect of full sun during the hottest part of summer, it will be injured thereby ; therefore let it be in a shady situation during that period, either in a pit frame or greenhouse. It is easily cultivated, and merits every attention.

NOTES ON NEW OR RARE PLANTS.

BEGONIA HERNANDIÆFOLIA.—Mr. Seeman sent seeds of it from Veraguas to the Royal Gardens of Kew, where, in the stove, it is now blooming. It is a stemless plant, and from the top of the root the leaves push forth, the stalk of each being about four inches long, and the thick leathery leaves are of a *deep blood* colour underneath, green above, with one light spot upon it. The flower stems are from four to six inches high, each bearing a spreading, drooping, corymbose head of blossoms, of a *deep rose-red* colour. It is, indeed, a lovely species, and blooms throughout the summer and autumn ; and no doubt, by suitable treatment, it would bloom through the winter and spring also. (Figured in *Bot. Mag.*, 4676.)

BEGONIA PRESTONIENSIS.—This very handsome blooming plant is a hybrid, raised in the garden of E. L. Betts, Esq., of Preston-hall, in Kent. The gardener, Mr. Frost, states that it was obtained by crossing *B. cinnabarina* with *B. nitida*, which *latter* has imparted to it a *shrubby* and *free blooming* habit. It is the handsomest *Begonia* in this country.

The flowers are borne in profusion, of a brilliant orange-scarlet, and sweet scented. Each blossom is an inch and a half across. Messrs. Lucombe, Pince, and Co., of Exeter, have the stock of this very charming plant. They state it flourishes in the *Greenhouse*, and the flowers are as fragrant as a tea-scented Rose. It merits a place in every greenhouse, and, we may add, in every sitting-room window of good aspect also. (Figured in *Mag. of Bot.*)

CENTROSOLENIA BRACDESCENS (Natural order Gesneraceæ).—A stove plant, growing two feet high, in the Royal Gardens of Kew, and blooms freely throughout the summer. Each blossom is large, white, tube-shaped, spreading wider upwards. The Calyx is a little shorter than the Corolla, of a red-purple above and white below. A handsome stove plant. (Figured in *Bot. Mag.*, 4675.)

LÆLIA PURPURATA (Orchideæ).—Messrs. Backhouse, nurserymen, of York, obtained this very strikingly handsome flowery species from St. Catherine's, in Brazil. Each blossom is six inches across. Sepals and petals pure white, the latter being very broad. The lip is three inches long, and rolled round the column, so as to form a tube, which spreads two inches wide at its terminating (front) limb. The lip is yellow in the middle, streaked with crimson, but the limb is of the deepest and richest purple. It merits a place in every collection of Stove Orchideæ. (Figured in *Paxton's Flower Garden*, 96.)

LILIUM GIGANTEUM.—Sir W. J. Hooker states, "The discovery of this 'Prince of Lilies' we owe, as we do so much of Indian, and especially northern Indian botanical novelty, to Dr. Wallich, who detected it in moist shady places on Sheopore, in Nepal." "This majestic Lily," writes Dr. Wallich, "grows sometimes to a size which is quite astonishing;" the stem measuring ten feet from the base to the top. The flowers are large and delightfully fragrant, not unlike those of the common white Lily of our gardens. Messrs. Cunningham, of the Comely Bank Nursery, Edinburgh, have had a specimen in bloom this year, the first bloomed in Europe, which had attained the height of ten feet, and the top portion of it, being the flower one, occupied twenty inches. Such a raceme of flowers, accompanied by leaves ten to twelve inches long and eight broad, must have afforded a striking object. The stem is straight, ten feet high, and five and a half in circumference at the base. Flowers white, with purple tinge inside, and purple sheaths, greenish below, funnel-bell shaped; twelve of these blossoms were in the raceme, each flower being about six inches long and nearly five across the mouth. The flowers incline with the mouth somewhat downwards. Major Madden sent seeds of it five or six years ago to Messrs. Cunningham, and the bulbs are treated in the ordinary way, without heat. Major Madden says, "The *Lilium Giganteum* is common in the damp thick forests of the Himalaya mountains, the provinces of Kamaon, Gurwhal, and Buschar, in all of which he has frequently met with it. It grows in rich black mould, the bulb close to the surface, at from 7,500 to 9,000 feet above the level of the sea, where it is covered with snow from November to April, or thereabouts. The hollow stems are commonly from six to nine feet high, and are used for musical pipes. The fruit ripens in November and December."

This truly magnificent Lily deserves a place in every garden, and no doubt will soon be spread throughout our own country. Plants are already in the principal nurseries. (Figured in *Bot. Mag.*, 4673.)

TACSONIA SANGUINEA (*Blood-coloured*).—Mr. Low, of Clapton Nursery, received seeds of this pretty species from Trinidad, under the appropriate name of *Passiflora Diversifolia*. It is a free bloomer, and Mr. Low states it will make a first-rate conservatory plant. It does not require much heat, and is easy of cultivation. The flowers are of a greenish-red outside, and a fine rosy-red inside. Each blossom is upwards of five inches across. It is a fine climber, highly deserving of a place in the greenhouse or conservatory. (Figured in *Bot. Mag.*, 4674.)

VERONICA FORMOSA.—The Beautiful Speedwell. It is a compact, evergreen, dwarfish, bushy shrub, with leaves very similar to the Evergreen-box. The flowers are of a clear bright blue, and are produced in little corymbs at the ends of the shoots. They are about the size of the common English *Veronica Chamædrys*. It is a very neat shrubby plant, and has stood outdoors uninjured at Abbotsbury, in Dorsetshire, where it blooms in summer, and is very beautiful. It is a native of Van Diemen's Land, growing on Mount Wellington. It is usually considered a greenhouse plant. (Figured in *Paxton's Flower Garden*, 95.)

CLEMATIS LANIGUNOSA. The *Woolly*.—Mr. Fortune sent this magnificent flowering plant from China to Messrs. Standish and Noble, of Bagshot. It has some resemblance to *Clematis Azurea Grandiflora*, but the leaves are *leathery*, not *thin*, and the flowers are much larger. Each blossom is about six inches across, and the petals are very broad, each more than two inches. They are of a pretty blue colour, with red filaments at the middle. It is as hardy, or more so, than *C. Azurea Grandiflora*; indeed, it is said to be quite hardy. It will prove to be, either in the greenhouse or outdoors, one of the finest climbers that our gardens possess. (Figured in *Paxton's Flower Garden*, 94.)

LOAZA BICOLOR.—It is an annual, brought from Central America by M. Warezewitz. The flowers are white, with a crown of scarlet scales, very pretty.

GRINDELIA SPECIOSA (N. O. *Compositæ*).—A hardy undershrub from Patagonia, in South America. Seeds of it were obtained by Henry Wooller, Esq., of Tulse-hill, London, and in his grounds it has formed a bushy plant two feet high, having from thirty to forty flower heads open upon it at the same time. These heads are covered to a considerable thickness with a transparent glutinous varnish, by which this species is at once known. The flowers are yellow, something like a smallish semi-double perennial sunflower, each being nearly three inches across. It is very ornamental, and merits a place in every suitable bed or border.

MAHARANGA EMODI (Syn. *Onosma Emodi*), belonging to the Borageworts. It is a hardy perennial from Nepal. The name *Maharanga* is that employed by the Nepaulese, among whom the great carrot-like root of the plant is used in producing a blue dye; the name is said to signify "a strong or intense colour." The leaves are similar

to some of the Echiums, Borage, &c., rough, hairy. The flowers are produced in racemes, gradually expanding from the bottom upwards, and each raceme having from twelve to twenty blossoms. Each blossom is about a third of an inch across, of a pale rose, tinged with blue towards the end. It has bloomed in the Botanic Garden, Glasnevin, Dublin.

LANDSBERGIA CARACASANA.—A tuberous-rooted stove plant, belonging to the Irids (Iris, &c.). It is a native of the Caraccas, and has been introduced to the Botanic Garden at Leyden. The stems grow to about two feet high, having terminal spathes of from ten to a dozen or more flowers. Each blossom is nearly two inches across, of a golden yellow, spotted with black. It is said to flower all the year round. Professor de Vreise describes it as having the habit of a Marica or a Moræa. Curious and beautiful.

ASTER AMELLUS GRANDIFLORUS.—This is a very pretty Michaelmas Daisy, growing half a yard high, bearing fine heads of lavender-lilac flowers, which, in contrast with the yellow centre, is very pretty. Each blossom is nearly two inches across. It deserves a place in every garden.

ASTER FORMOSUS.—It is a very neat-growing bushy plant, three feet high, and a most *profuse* bloomer. The sides of the plant are adorned from near the ground to the crown with its beautiful flowers. Each blossom is an inch across, of a peculiarly pretty rosy-lilac, with a striking yellow centre. It merits a place in every garden.

OXALIS CUPREA.—The foliage of this very pretty plant only rises to two or three inches high, but forms a lovely green carpet. The flowers are of a pretty yellow, slightly tinged with coppery colour. They just rise above the green mass of leaves, and shine with a beautiful striking contrast; and being now (October 18th) in *profuse* bloom, renders it more valuable. It ought to be grown in every flower bed.

COREOPSIS AURICULATA.—A hardy perennial, growing two feet high, and blooms freely at this late period. The blossoms are of a bright yellow, an inch and a half across.

COREOPSIS GRANDIFLORA.—Grows three feet high, and blooms very freely thus late. The flowers two inches across, of a bright golden-yellow.

TRADESCANTIA VIOLACEA.—A hardy perennial, growing half a yard high, and blooms very freely. The flowers are about the size of the common Tradescantia Virginica, the spider-wort of our gardens, but are borne in larger trusses, and of a beautiful violet colour. It is now exceedingly pretty.

VERONICA AMETHYSTEA.—A hardy perennial, growing from six inches to a foot high, and now in beautiful bloom; its numerous spikes of fine blue flowers render it very pretty.

ERODIUM MANASCADENIA.—This is a hardy perennial, growing about half a yard high, each blossom being two inches across, of a bright purple, with a light centre, and in form somewhat similar to the old dwarf-spreading Geranium Nodosum of our gardens. It is neat and pretty.

CROWEA STRICTA.—This is a very neat dwarf-growing, *free-bloom-*

ing, greenhouse plant. When but a foot high, and formed into nice bushy plants, they bear a profusion of flowers, of a rosy-pink colour, and each blossom an inch and a half across.

CROWEA LATIFOLIA.—This is even a neater bushy plant than *C. stricta*, and blooms equally profuse. The leaves are broad, and the blossoms as large as *C. stricta*, and of a deep rose colour. Both species deserve a place in every greenhouse, blooming not only in autumn and winter, but nearly all the year.

ALSTROMERIA OVATA.—This is a fine autumn blooming plant, and the profusion of its orange flowers, spotted with dark, are beautiful and ornamental. It is now in fine bloom in the open ground.

GRAMMANTHUS CHLORÆFLORA.—We have seen a considerable number of patches of this very pretty dwarf-spreading plant in bloom during the past summer: it was exceedingly beautiful, and bloomed in profusion. The soil was peat and loam in equal parts. It makes a neat plant for edging a vase, or for a bed of low-growing plants. Pots of it on the greenhouse-shelf succeed well.

PENTSTEMON ATRO-CÆRULEUS.—A very handsome hybrid, which was raised from seed saved from the *true P. gentianoides*. The blossoms are very long, of a fine blue, streaked with deeper colour.

PENTSTEMON GRANDIS.—Another hybrid, obtained from the same batch of seed as the above, and the blossoms are even larger; they are of a lilac-violet deep blue, striped with white and carmine. Both were raised on the continent, and merit a place in every garden.

DODECATHEON MEDIA ALBA COMPACTA.—A very pretty dwarf-growing variety; the flower-stem being six inches high, and bears an enormous head of flowers, white, with a yellow centre.

CROCUS SPECIOSUS.—This is a very charming autumn bloomer; the flowers are large, of a rich blue, slightly striped. It is a valuable companion to the *Colchicums*.

AMARYLLAS (or *Sternbergia*) **LUTEA** is also a very pretty autumn bloomer; the flowers rise from four to six inches high, of a bright yellow, and contrast charmingly with the above. Every flower-garden, especially near a dwelling-house, should have these three families of plants therein. They are to be had very cheap of most of the seedsmen.

TREATMENT OF THE HYACINTH IN GLASSES.

BY MR. WILLIAM HAMILTON, SEEDSMAN, 156, CHEAPSIDE, LONDON.

THE following cursory remarks may not prove altogether unacceptable to some of your readers at the present time, when many who wish their parlours to look gay with that most beautiful of all early spring flowers, "the Hyacinth," are purchasing, or are about to purchase, their supply of roots and glasses.

I have had many years' experience in the culture of the Hyacinth in its simplest form, viz., in water-glasses; and every year brings me more and more to the conclusion that the long glasses, with broad bottom

and contracted neck, most generally in use, though the best that can be had for the purpose, are but very imperfectly adapted for what is wanted.

The Hyacinth, when put into these glasses, have always a tendency to get mouldy, which, if not looked after, ultimately leads to the total decay of the bulb; and the cause of which mould appears to me to be the depth of the mouth made to them; for, by the bulb being "swallowed" by these "voracious" mouths, the air is prevented circulating round it, and the evaporation from the water takes hold upon it, and so congregates, that unless promptly attended to, the devouring propensities of this mould soon makes inroad upon the bulb, and creates a filthy smell from decay; the result of which is, a glass, instead of being occupied by a sound and healthy root, is filled by one that had much better be on the dunghill than in a sitting-room, even if all the sweet waters of Cologne were playing from a fountain in every corner. Those who delight, therefore, in having this beautiful and simply cultivated flower in their sitting-rooms should, when purchasing their glasses, look to the shallow-mouthed ones; and as an illustration of the utility of this I may mention, that for four years I have grown a Hyacinth in a peculiarly shaped pickle-bottle, the mouth of which is only large enough to admit of the base, and not one whit more; the whole of the bulb is consequently left freely exposed to the air, and I have yet failed in ever discovering a vestige of mould, but, on the contrary, have always found it to be perfectly dry; and "Grootevat" being the root, I have been compelled to honour with this throne, from its base being small and better adapted than any other for my "peculiar friend," the bottle, it has always been the acme of perfection.

To be very successful, then, with the Hyacinth when grown in water, *deep-mouthed* glasses should be avoided.

It may be argued by some, that large as the mouths are of the glasses as at present made, they are not size enough for some of the largest roots; true, but I am of opinion that the glasses, take them all in all, are as little adapted for the purpose as an egg-cup would be to grow an acorn. The eye has become accustomed to them, and from long use, and the want of anything better, they are patronised; but however large the mouth is wanted for bulky bulbs, surely it is in width and not in depth.

I have devised a form of glass which, if I am spared, will be issued into the floricultural world next season; and if not more elegant, I have an idea it will be much more suitable. The present glass is made from an absurd notion that the fibres of the Hyacinth bulb grow perpendicular; whereas if one is planted in earth, and lifted after it has begun to shoot, the fibres will be found spreading in all directions; why therefore should they be contracted when put into glasses, and not allowed their natural course?

Having made these remarks upon the Hyacinth glass, a few more upon the Hyacinth *supporter* may not be ill-timed. It is now four years since I introduced the supporter to the public; I was led to do so from having long found a want of some support to this fine flower, as frequently I have seen some of my best blooms snap right

through the stem from their own weight, and in other cases from their long and weak stems; to guard against this I invented the supporter, and thought it an acquisition, as it answered, and does now answer, the purpose in this respect; but unfortunately, like their neighbours the glasses, they have a great fault, which I am bound to admit, after severe practical experience. The supporters, when put into the glasses, so affect the water that a filthy slimy substance is formed, which envelopes the bulb as a spider does a fly in its web, precluding the freedom of growth, and deteriorating the bulb to such an extent, that anything but an average bloom may be expected.

The supporters, then, like the deep-mouthed glasses, should, if possible, be avoided, unless they are obtained lackered, in which case they answer the purpose for which they were intended, and save many a fine spike from premature destruction, as they do not affect the water when they have undergone this process, at least as far as I have been able to discover; but this season will give me ample testimony.*

Having generally been very successful with Hyacinths, Narcissus, &c., in glasses, I have wondered why they are not more grown in this way, as by simply keeping the glasses filled with water to the base only of the bulb, and guarding as much as possible against the evils attending deep-mouthed glasses and unlackered supporters, they will usually yield flowers which will amply repay any trouble, and afford much pleasure to those who, being fond of flowers, yet have no conveniences to grow them in any other way.

TREE CARNATIONS.

BY MR. JOHN BURLEY, FOREMAN AT THE WELLINGTON NURSERY, ST. JOHN'S-WOOD-ROAD, LONDON.

THIS being the season when these most charming plants bloom in their beauty, either grown in pots in the greenhouse, or for ornamenting the conservatory during the usually dull months of autumn and winter, also when trained against a good-aspected wall out-doors, where they blossom in profusion, as is the case even now, many of the plants having dozens of their strikingly-handsome, sweet-scented flowers, I am, in consequence, induced to bring this valuable class of flowers more particularly before the readers of this Magazine, and from a vast number of varieties, have taken notes of the very best, and which I trust may be a guide to those individuals who are desirous of possessing some of the best, of recent origin.

ALPHA is a fine, large, dark crimson self; a free bloomer, and highly perfumed; new.

PHŒBUS is quite a novelty in Tree Carnations. It is a bright yellow, striped with bright cherry colour; a free bloomer, and a large close flower; new.

* I may here mention that all who have kindly patronised me for the supporters, may get them exchanged for lackered ones; those for pots do not require this process, as I have not yet detected any evil tendency from them when in earth.

BEAUTE PARFAIT, a large flower, of a bright scarlet colour, flaked with white; very sweet; new.

BICHOV, a very attractive and beautiful variety, the colours being pink, white, and crimson, having a very large, close pod; highly fragrant and very distinct; new.

BLANC VIRGINALE, a fine bright scarlet self, having a fine close truss; new.

GRAND SULTAN, a pure white, which is highly perfumed. The pod is close, and habit of the plant very good.

JUSQUES D'ARAGON, a large, dark crimson self, quite as richly perfumed as the old crimson-red clove.

VALENTINE, quite a novelty in colour, being a chocolate striped with crimson; very pretty and very sweet.

ADONIS is certainly one of the very best; the colour is a bright scarlet, striped with dark crimson; pod, close and compact; habit, excellent.

LA ROSIERE, a very fine rose-flake; very sweet scented.

MANTEAU D'EVEQUE, a very nice variety, of a good purple colour. Habit good, and very sweet.

MADAME LA COSTA is a very fine large flower, a bright cherry colour, and having a very rich clove perfume.

The above twelve fine varieties are the best in cultivation, all quite new, but merit a place wherever they can be grown.

The following twelve are the best of the older varieties; they are very handsome, but may be procured at a proportionate less price.

ATILLA, a scarlet and white flake; a very free bloomer, and sweet scented.

BELLE ZORA, a beautiful salmon-pink, with crimson stripes and blotches; very sweet and of good habit.

CASSANDRA, a good, bright cherry colour; very sweet, and good habit.

FORGE DE VULCAINE, this is one of the brightest scarlet selfs grown, and there ought to be one in every collection.

ISIS, a pure white, beautifully mottled with salmon colour; pod good, and perfume very rich.

TIFUS, fine bright crimson self, of dwarf habit, and a free bloomer; good pod, and very sweet.

MADONNA, blush, striped and spotted with crimson.

LA SERME, pretty blush-white, beautifully mottled with rose, and very sweet; habit good.

MOUNT ST. BERNARD, a splendid variety. It is a scarlet and maroon flake; habit good, and truss fine.

NONPAREIL, a beautiful blush-white, the best of its colour.

PUNCTATA, a bright rose and carmine dappled.

UNION, a beautiful crimson distinctly mottled with white; one of the best older varieties.

The last twelve should be procured by those persons desirous of having a collection of those beautiful flowering plants; being older, larger plants can be had than of the recent raised ones, and may be had at most of the general Nurseries. They will amply repay with their

beauty and fragrance for the little attention required in cultivation. They flourish in a strong loam and well-rotted manure, with a liberal drainage, in the same as the Florist Exhibited Carnations, but the Tree Carnations are much more readily grown and perpetuated.

Cuttings strike freely, in pots, in a light sandy loam, under a hand-glass, or a small one-light box, and when rooted must be potted in small pots, and be kept close for a few days, after which they should have all the air they can, and they will grow rapidly and soon be in flower.

MISCELLANEOUS SECTION.

GARDEN ANTIQUITIES.—No. 1.

ABSTRACT of a letter from the worshipful John Evelyn, Esq., F.R.S., concerning the damage done to his garden by the severe winter of 1683. Read before the Royal Society. (*Trans.*, 1684, p. 559.)

"As to timber trees, I have not many here of any considerable age or stature, except a few elms (which having been decayed many years), one cannot well find to have received any fresh wounds distinguishable from old cracks and hollownesses; and, indeed, I am told by divers that elms have not suffered as the great oaks have done; nor do I find any of twenty-five or thirty years' standing, that have been touched. The same I observe of limes, walnuts, ash, beech, hornbeams, birch, chesnuts, and other foresters; but, as I said, mine are young comparatively. The rifting has occurred chiefly among the overgrown trees, especially oaks. As for exotics, I fear my cork trees will hardly recover, but the spring is so very backward (even in this warm and dry spot of mine), that I cannot pronounce anything positively, especially of such whose bark is very thick and rugged, such as the cork, enzina, and divers of the resinous trees. The Constantinopolitan, or horse-chesnut, is turgid with buds, and ready to expand its leaf. My cedars, I think, are lost; the ilex and scarlet oak not so; the arbutus doubtful, and so are bays; but some will escape, and most of them repullulate and spring afresh if cut down near the earth at the latter end of the month; the Scotch fir, spruce, and white Spanish (which last used to suffer in tender buds in spring frosts) have received no damage this winter. I cannot say the same of the pine, which bears the greater cone, but other Norways and pinasters are fresh; laurel is only discoloured, and some of the woody branches mortified. Among our shrubs, rosemary is entirely lost, and to my great sorrow, because I had not only beautiful hedges of it, but sufficient to afford use for the making a very considerable quantity of the Queen of Hungary's celebrated scent water; so universal I fear is the destruction of this excellent plant, not only in England, but over our neighbouring countries to the southward, that we must raise our next hopes from the seed. Halimus, or sea purslain, of which I had a pretty hedge, is also perished, and so another of French furzes; the cypress are all of them scorched, and some to death, especially such as were kept shorn in pyramids; but amongst great numbers, there will divers escape. The

berry bearing savine has not suffered in the least ; it perfectly resembles the cypress, and grows very tall and thick. I think the arborthuja is alive, and so is the American acacia, acanthus, paliurus, pomegranad ; my laurustinus looks suspiciously ; some large and old alaternuses are killed. The phillyreas angusti and serralifolias (both of them incomparably the best for ornamental hedges of any of the perennial greens I know) have hardly been sensible of the least impression, more than tarnishing their leaves ; no more have the Spanish jasmines and Persian. As for the choicer kinds that are set in for hyemation, they certainly escape according as they are treated, or the commodiousness of the conservatory ; but to say what may be added on this subject would require a chapter. I would in the mean time advise such as have suffered in their greenhouses not to despair when they see leaves of their myrtles, oranges, oleanders, jasmines, and other precious shrubs, russet or fallen, but to cut them to the quick, plaster the wounds, and plunge their cases or pots, trimmed with fresh mould, in a warm bed. But, above all, not to expose them till these eastern winds be qualified, nor until we see the wise mulberry put forth, which is certainly a most faithful monitor ; nor should we in any wise cut or transplant any of the perennials until they of themselves begin to sprout. I need say nothing of the holly, box, yew, juniper, &c., and yet, to my grief, I find a holly standard of near 100 years old, drooping and of doubtful aspect, and a very beautiful hedge, though much younger, being clipped about Michaelmas, is mortified near a foot beneath the top, and in some places to the very ground. So as there is nothing seems proof against such a winter that is late cut and exposed. Among the fruit trees and murals, none seem to have suffered save figs, but they being cut down, will sprout again at the root. The vines have escaped, and of the esculent plants and salads most, except artichokes, which are universally lost ; and (what I prefer before any salad whatever, eaten raw when young) my sampier is all rotted to the very root ; how to repair my loss I know not, for I could never make any of the seed which came from rock-sampier (my kind) to grow. The arborescent and other sedums, aloes, &c., though housed, perished with me ; but the yucca and opuntia escaped. Tulips, many are lost ; and so the Constantinople Narcissus, and such tuberosæ, as were not kept in the chimney corner where was a continual fire. Some anemonies appear, and I believe many are rotted ; but I have made no great search in the flower parterre. My tortoise (which by his constant burying himself in earth on the approach of winter, I look upon as a kind of plant-animal) happening to be obstructed by a vine root from mining to the depth he was usually wont to inter, is found stark dead, after having many years escaped the severe winter. Of fish I have lost very few ; and the nightingales are as brisk and frolic as ever.

“ Say’s-court, Deptford, April 14, 1684.”

CAPE ORCHIDS.—The terrestrial Orchids deserve more than a passing remark : they are numerous and very beautiful ; in my opinion there are many here but little inferior to the most showy of the epiphytous kinds. I shall take care to forward a good parcel of roots, and then perhaps cultivators may have an opportunity of judging for them-

selves. In the meantime a description, however faint, may induce some to give them the attention they so well merit. Fancy, then, a plant with the general characteristics of an *Ophrys*, producing a spike of flowers as large and as thickly set as those of *Saccolabium guttatum*; often, indeed, measuring 2 feet in length, of a bright salmon-colour intermixed with as bright a yellow. Another with plaited foliage and a nodding head of some twenty bright yellow blossoms, having a deep stain of crimson on the cucullate lip, in the manner and of the size of *Dendrobium*. Again; a species with fleshy persistent leaves and an erect stem of about 2 feet, supporting from fifteen to thirty large yellow flowers, the lip blotched and lined with pale purple, bearing the aspect of some robust *Epidendrum*; and others whose white and pink blossoms at a little distance are easily mistaken for *Hyacinths*. Mingled with these is often found a plant not less curious or beautiful, which I imagine to be an *Orobanche* (*Harveya capensis*, Hook. Ic. Plant. t. 118): its habits agree exactly with that parasite; it produces a flower stem of about a foot in length, bearing five or six very large pure white flowers, averaging about 3 inches in diameter; it is usually found adhering to a thistle. With regard to the culture of African terrestrial Orchids, I would observe that the soil I fancy the nearest approach to their native medium will be found in the black alluvial mould of marshes or water-meadows, tempered with pure sand, which enters largely into the composition of all the soils here, where we have nothing like the peat-soil of England, nor is there much decaying vegetable matter present where these Orchids are usually found. All those from the coast are subject to a long period of drought; and unless specially marked as the inhabitants of swamps, this fact will have to be borne in mind. The dry season commonly extends from April to October, and for two months towards the end of this period they may be said to be perfectly dry, and being in most cases but just beneath the surface would be subject to extreme aridity, were it not for the shelter afforded by the thick vegetation of herbs and grasses by which they are surrounded. In October the rains begin at first but sparingly; dews, however, are frequent and heavy, and in November and December the ground becomes saturated; January and part of February dry weather usually prevails, to be succeeded by even more rain than before. Most of the terrestrial Orchids bloom at the beginning of each of these rainy periods, and by the end of May the leaves of such as are deciduous wither and die off. The mean temperature need not be high for them, as I frequently find the coast plants running back to an elevation of 2,000 or even 3,000 feet, and at this height sharp frosts are very common in our winter season. I fancy that greenhouse treatment, with the help of a close frame at the commencement of their growth, will prove all that is needed, and to keep them rather less dry than is usual with bulbs, during the torpid season.—*Plant's Excursion in the Zulu Country, in Hooker's Journal of Botany.*

CULTIVATION OF THE RANUNCULUS.—This most lovely race of flowers deserves every attention, and a collection ought to be grown in every garden where circumstances admit. Mr. William Willison, nurseryman, of Whitby, has given the following particulars in the *Midland*

Florist of a most successful method of growing these beautiful flowers. The following we extract from the excellent remarks he has made :—

“ Last autumn, writing to my friend, Mr. Lightbody, on business matters, he offered me some of his fine ranunculuses. I said to him that myself, with many other persons, had given them up entirely, it being so difficult to get a fine bloom. In his reply, he said that he would make it a very easy thing, if I would attend to the following directions, which were very simple and very kindly given. Those directions being quite free from any perplexing nostrums, I at once agreed that he should send me a few of the very best he had. Those I soon received, forty in number, which, according to his catalogue price, amounted to nearly eight pounds.

“ But what were the accompanying directions? As near as I can recollect, they were these :—‘ The ranunculus must have something to live upon. In the autumn, I throw out a trench, from one foot to eighteen inches, according to the depth of the soil, putting at the bottom some well-rotted cow-dung or old hot-bed manure, filling it up again with the same soil. In the month of February, rake it very fine, plant exactly an inch and a half deep, destroy all weeds and vermin, press the soil firmly about the necks of the plants, and I have no doubt you will have what will gratify you. One of the most important things to be attended to is not to let the roots remain in the ground after the foliage has changed in colour. If you want any other information, I shall be most happy to give you it.’ Being then in possession of those valuables, I thought I must once more try my skill : I therefore made choice of a bed two yards from a south wall, throwing out the soil as directed, and collecting a few baskets of well-seasoned dung from a cow pasture, I put it at the bottom, sixteen or eighteen inches below the surface, covering it up with the soil thrown out. In the month of February, I made the surface fine and even, by raking the soil ; I then drew off the soil to the depth of an inch and a half or two inches, marking the place where each root should be planted by putting down a small pinch of silver sand, in which I inserted each root ; and now, in order to carry out the directions given me, and that I might not cover them over much, or too little, I stuck in a few pegs, leaving just two inches out of the ground, so that I might cover them very exactly, and when the soil had settled, they would be just an inch and a half deep.

“ Thinking that Ranunculuses often suffered from drougthy weather, I tried to obviate this by setting up a thin screen of branches, six or eight feet high, on the south side of the bed, partially to break the rays of the sun, but not altogether to exclude them. This done, they lay still for some weeks, when all came up except No. 1, which, like the bubbles on the river after which it is named, had glided for ever out of being. The weather now being dry, I occasionally sprinkled them over with water ; and being fairly up, in order to compress the soil around the necks of the plants, I carefully walked through and through. Under this treatment, they grew most luxuriantly, raising my expectations every time I inspected them, especially as all who saw them declared they never beheld such plants. At length they nearly

all came into bloom ; but now comes my task of giving a correct description of their beauty and growth.

“Mr. and Mrs. Archibald Johnson were amongst the giants of the bed, most beautifully formed and sweetly marked, Archibald looking over the head of his fair lady full four inches, she having raised her lovely face no less than seventeen inches high. Those are gems of the first water. Near by, were the lovely Jenny Deans and Nydia, with delicate red edging, on pale yellow ground, rising to the height of seventeen or eighteen inches. Roxalana, quite as stately, very large and showy, but not quite so chaste as those above. Petrel, seventeen inches high, certainly more like an eagle, with gold-tipped wings, rising to meet the sun, than a bird of storm, was brilliant yellow, tipped with red, of the finest form. Felican, rising to the same height, exquisite in form, with a clear rose edge, on white ground. Phroine, William Bradshaw, Aboukir, Zebina, Cyra, Prince of Wales, and Commodore Napier, with Thomas Hood, and Little Nell, all attained to fifteen inches, and formed an assemblage of beauty rarely equalled. Liffey, Sultana, Delphos, Ashwelthorpe, Baritola, and Hon. Robert Wilson, fell an inch lower than the above group ; still they were equally beautiful. Philomel, Charybdis, and Claudiana, beautiful, especially the last, were thirteen inches. Emily, Dr. Horner, and the lovely Anne Hathaway, were one foot. And now, to end this long, and, I am afraid, tedious description, I shall just notice the lowest, rising only to eight inches here : Mackenzie, the author of ‘The Man of Feeling,’ seems to stoop to those chaste, lofty, and beautiful personages around him, to adore and admire. I may just add, that although the flowers were not very much larger than usual, there were those amongst them of the finest form and colour, from two to three inches over, while some had stems a quarter of an inch, or more, thick.”

ON THE DISTRIBUTION OF THE MARINE ALGÆ ON THE BRITISH AND IRISH COASTS, WITH REFERENCE TO THE (PROBABLE) INFLUENCE OF THE GULF STREAM, BY PROFESSOR DICKIE.—There were, he said, forms of marine Algæ generally admitted to be characteristic of our northern coasts, and others of the southern. The remarks he was about to make referred to those generally deemed of southern type ; that is, those which usually are more or less abundant in low latitudes, and, on the other hand, are absent from high latitudes. Such species, natives of our coasts, may be classed under three heads : first, those confined to the southern parts of Great Britain and Ireland ; second, species of more extensive range, since they extend to the north of Ireland and south-west of Scotland ; third, those found abundantly in the south of England, and ranging along the western coasts of both islands, as far as Orkney and Shetland ; and the species enumerated under these three classes, and amounting to more than twenty, are, so far as we can ascertain up to the present time, absent from a certain part of the east coast of Scotland. A considerable proportion of them re-appear in Shetland and Orkney. The marine vegetation in these northern islands resembles that of the north of Ireland, though there is a difference between them of from four to five degrees of latitude. The marine plants of some of the north-eastern counties of Scotland, intermediate

in latitude, are of more boreal character. The drifting of tropical fruits, &c., to the western and northern parts of Ireland and Britain, is a proof of the direction and presence of the gulf stream; the development of southern forms of Algæ, at the extreme northern parts, is a proof of the same, and, moreover, seems an indication of its influence in reference to temperature. Are we to consider their absence from certain parts of the east coast of North Britain as owing to a lower sea temperature than in localities where they exist? The portion of the coast in question is precisely that which, from the generally understood course of the gulf stream, may be least exposed to its influence. Investigations respecting the temperature of our seas are, however, still desiderata; and without such, an important modifying element has been overlooked, having reference to the climate of the British islands. Professor E. Forbes said that the distribution of marine animals corresponded with those of marine plants. The same anomalies which Dr. Dickie has pointed out with regard to plants existed with regard to animals. Less attention had been given to the distribution of marine Algæ than almost any other organic existences. With the exception of the labours of Dr. Harvey, little or nothing has been done. We wanted a more accurate knowledge of the temperature of the ocean at different depths.

“ Call us not weeds—we are flowers of the sea,
For lovely and bright, and gay tinted are we;
Our blush is as deep as the rose of thy bowers,
Then call us not weeds, we are ocean’s gay flowers.

“ Not nursed like plants of a summer parterre,
Where gales are but sighs of an evening air;
Our exquisite, fragile, and delicate forms
Are nursed by the ocean, and rock’d by its storms.”

(Anon.)

TREATMENT OF RONDELETIA SPECIOSA MAJOR.—This is one of the most lovely flowering stove plants. Its large trusses of brilliant orange-scarlet blossoms are exceedingly handsome and highly ornamental. When properly grown, each blossom is nearly the size of a sixpence. The plant naturally grows somewhat thin of shoots, and straggling, but, by due attention in often stopping the leads, the plant can be easily formed into a *pretty bush*, and such stopping tends to a proportionate increase of its terminal heads of showy flowers. And by having a few plants, stopping the leads, repolling, &c., at sundry times, such a succession may be had to supply bloom all the year. Where there is not a stove, it may be forwarded in a *warm pit frame*, and when its blooming heads first appear the plant may be put in the greenhouse to flower. The plant, *when growing*, must have a moist temperature by syringing, pouring water on flues of pipes, &c., of seventy degrees; when in bloom, a lower heat, and not any water upon the flowers, but sprinkle the leaves often, dust the under side with sulphur occasionally, to prevent red spider attacks.

When the plant has done blooming, it requires a drier atmosphere, and the soil to be kept barely moist, so that it may have a period of rest, after which repot, place in a higher and *moist* atmosphere, &c.

It flourishes in equal parts of good prepared turfy loam, peat, and *well-rotted* dung, with bits of charcoal sprinkled amongst. It merits a place in every stove or warm greenhouse. It may be had, too, at a trifling cost.

FORCING THE LILY OF THE VALLEY.—In a recent Number instructions on this subject are given by "A London Practical Gardener." The following mode of treatment is by a clever country gardener in Cheshire, who has been eminently successful in forcing it. His method of treatment is given in the "Garden Companion," and he observes :

"It requires two years to prepare the Lily for forcing, in order to have it in the highest degree of perfection. Now, it is well in Lily forcing to have *two sets of plants*, the one in the open ground, the other in pots from the commencement. The latter is by far the best for *early forcing*; the former will produce more exuberant blooms at a later period; the pots producing from the end of November until the end of January; those potted from the soil, from that period until Lilies blossom outdoors.

"Large pots are necessary; and those who intend to procure a long succession for the drawing-room, will do well to get some shallow pans made for the purpose. Such should be about nine inches diameter, by about seven inches in depth, and would, as I think, look respectable if painted a deep straw colour, and sanded over with large and sparkling grit whilst wet.

"New plantations may be made any time from November to March. They love a sound and rich soil, which retains moisture in a *steady way*, but not in *excess*. For pots, one-half strong loam, and the other half composed of very old cow manure and leaf soil, thoroughly decomposed, grows them in the highest perfection. In making new plantations, the ground may be marked out into beds; and my practice is to plant them in circles of about eight inches diameter; the circles, fifteen inches apart, are filled with young plants. When planted, I cover the whole surface three inches with very rotten manure, as a mulching, and this proves of immense benefit.

"Of course, the planting in pots is conducted in a similar way; but the latter should be *plunged* during the whole of their culture. The Lily loves a partial shade. I grow them on a wall border, on the *north side*, where, although they get a liberal amount of solar light, the soil, from its northern inclination, is kept comparatively cool through the summer. The summer's culture consists in keeping them free of weeds, and in liberal watering, and all blossom buds should be pinched off the newly-planted stock the moment they appear; indeed, by taking them away the second spring, a much superior "crown" is obtained.

"And now as to forcing: bottom heat is essential. In common with other herbaceous things, which store up in their roots the material by which the buds are developed, the root must be *forced into action first*. About sixty to seventy degrees is the bottom warmth most congenial to them. A plunging medium will be found the best—any fermenting material will do. Like the germination of seeds, some degree of *darkness* is of material benefit. Any structure which will give the above

bottom warmth, with, at the same time, a much moderated top heat, of say fifty-five, is the place for them; and in this respect they class very well with the forcing of Dutch bulbs, their treatment for a while being nearly identical. In such a situation, they should be plunged *overhead*, covering the crown with six inches of finely-sifted old tan or vegetable mould.

"In about three weeks or a month from their introduction to such conditions, they will begin to show their heads above the soil; and here what is termed in horticultural language 'cooling down,' must be resorted to. They have to be gradually inured to the light, and this is the work of another fortnight or so. Any structure which will afford them a gradually departing shade, with a temperature of fifty to sixty degrees, is the very place for them. And now, for the first time since their introduction to artificial warmth, occasional waterings will be requisite. As before observed, the Lily loves moisture, and weak and clear liquid manure may occasionally be administered. When the blossoms begin to unfold, any cool greenhouse will suit them; a depressed temperature, minus frost, will but tend to render the blossoms finer; so that whether fancy points to the drawing-room, the boudoir, or the snug parlour, it is all the same: anything but a very *high* temperature.

"In conclusion, I may add, that those cultivated in the open soil, for later purposes, must be placed in pots in the middle of November, and, after a thorough watering, plunged overhead in any dry spot out-doors, and then subjected to the same ordeal in their turn. Like most other 'rest roots,' they produce the finest flowers by a gradual course of forcing, especially whilst the torpid root is acquiring a fresh action.

"After forcing, the roots may have a renewal of their vigour by kindly attention, in the way of shelter, top-dressing, liquid manure, &c. I prefer, however, a fresh succession, and plant out the rejected ones in the common borders."—ROBERT ERRINGTON, *Oulton Park*.

HOW TO HEAT A SMALL GREENHOUSE CHEAPLY.—Being fond of flowers, I put a window 10 feet by 5 into my lobby, with a stand in front, endeavouring, by the addition of a stove, to preserve some plants over the winter. The exposure was to the north, and two-thirds of them were destroyed by damping off, or otherwise. Under such circumstances I resolved to erect a small greenhouse, with an exposure to the south; and here I wish the particular attention of such as are similarly situated with myself, that is, not overburdened with cash, and therefore who desire to be as moderate as possible in the erection of a greenhouse. I bought old windows, 8 feet by 4½; the cost of each was 9s., and put glass cupolas on the top as a roof, 2½ feet in height. The size of the house is 8 feet by 8, and consequently at the highest point 10½ feet. The total expense, after painting, was under £10. The roofing consists of two cupolas, each 8 feet long by 4 feet wide, with a zinc conduit between and round the whole house. The next point to be considered was an effectual mode of heating the same, and at how little expense, during the winter season. As I live in Edinburgh, in inclement weather my gardener and his wife remove from their cottage and live in my kitchen during my absence, consequently a fire

is kept on there night and day. The idea struck me that a pipe placed in the fire, open at both ends, the one end open under the bottom of the grate, and which pipe, after being led the whole length of the fire-place, and being again conducted a second time through the fire, and thence through the wall into the greenhouse, might effect the purpose desired. It has been in operation now for three years, and has succeeded most admirably, without a farthing more cost to me. There is a stop on the end of the pipe which enters into the greenhouse, by which the heat can be excluded when necessary. The expense of the pipe, with building, was under £5. Its diameter is three inches, and the surrounding cast-iron half an inch in thickness. It is of great importance to have the iron pipe of heavy metal; for should the fire go out in the night, hours will elapse before it becomes so cold as not to be a protection from frost.—*W. K. A., in Gard. Chron.*

HEATING GREENHOUSES WITH GAS.—About two months ago, a gentleman in my neighbourhood asked me what was the most economical way of heating a greenhouse 12 feet by 9. An idea struck me, that if a small gas-pipe could be brought under ground from the house to the greenhouse, and then carried through the latter by piping, it would answer. This has been effected in the following cheap and easy manner. A wrought-iron box was made two feet square, with a door in it for opening to light the gas, as well as to give it air to burn with. This box was fixed in the brickwork, near the back of the east end of the house; from this a 3-inch pipe fixed near the top of the iron box, was led to the other end of the house, from which, after rising six inches higher, it was conducted back again and passed through the end of the house into the open air, where, forming a bend, it ran up the outside in the shape of a chimney, with a little cap on the top to keep out the rain. The gentleman has had this contrivance lighted several times to show it to his friends, who are all so satisfied with it that they mean to have one put up for themselves. The burner is a fish-tail, which can be regulated so as to furnish much heat or little. No lighting till required is needed; no burning or overheating over-night; and as to economy, when full on, it burns six feet of gas per hour. Instead of wrought-iron pipes, however, they should have been cast-iron, with saddles on them to hold water; but even in the present case a zinc saddle might be made to answer. I had the gas lighted when I went to inspect it, and in five minutes the pipe was hot at the other end of the house. This simple apparatus will not rest here; if gas can be applied upon a small scale it can upon a large one, and no doubt in time forcing-houses will be warmed by it, as well as melon and cucumber-pits, &c. But I hear some one say, "Country places cannot have it." Cannot gentlemen put up a small gas apparatus? Only one fire would then be wanted for an entire establishment.—*James Cathill, Camberwell.*

The difficulty with gas has always been that it burns the air, and also contaminates it by escape. It is indispensable that both these evils should be effectually guarded against; not an easy thing to do, as is shown by a number of failures.—*Dr. Lindley. (Gardeners' Chronicle).*



FLORAL

OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

PROCEED with all despatch to plant shrubs, herbaceous plants, &c., to enable each to become established before spring. In the protection of tender things, the principles demanding attention are few and simple. A comparative degree of dryness is the first great essential, whether in the atmosphere or the soil. In a frame or pit, this amount of dryness cannot be guaranteed without motion in the air; and this, of course, in the absence of fire-heat, must be accomplished by a very free ventilation at every fitting opportunity, remembering that a small amount of frost is, in general, less prejudicial than an *accumulation of damp*, which will rapidly tend to a kind of mortification in the system of the plant. The same atmospheric conditions are to be obtained out of doors, as far as attention can secure them; thus, half-hardy plants against trellises or detached, if covered with a mat and stuffed closely with hay inside, will be in danger of perishing of what we may for the present term suffocation; the same specimen will always run through a long winter better with the mat alone, more especially if the collar is well protected by some dry and porous material, and, above all, the root well top-dressed with sawdust or ashes, or perhaps the two blended. As to comparative dryness of the soil, that must be accomplished principally by the most perfect drainage; this is, indeed, the greatest desideratum with plants of tender habits; indeed, without it, other appliances are seldom satisfactory. Mounds of new sawdust, or dry leaves, raised around the stem, with a considerable body over the soil as far as the root ranges, will be found of immense benefit, as retaining the ground heat, which we believe ascends in a progressive way up the stem, to alleviate the effects of very severe weather. Standard and dwarf Roses of tender character will need protection. Finish directly the planting of all bulbs and Ranunculus, &c., which are intended to be put in before winter; a little sand round each will assist in preserving them from wet. Also plant out in a sheltered situation Brompton or Queen Stocks, so that they may be protected in winter, and reserved for planting out in spring. Tubers of *Salvia patens*, &c., should be kept dry. Plants of spring flowers, as Hepaticas, Primroses, Polyanthuses, Auriculas, Wall-flowers, bulbs, &c., should now be planted near the dwelling-house.

FLORIST'S FLOWERS.—*Auriculas* and *Polyanthuses* still require well looking after. A free circulation of air amongst the pots may be given by raising the frame a few inches from the ground. *Tulips* should be planted as the first opportunities offer. The readiest and most regular way is to plant them on the surface of the bed unfilled to within four inches of the destined surface. Seven strings are then stretched

lengthways at equal distances, and secured by nails at each end of the bed; when the bulbs are planted a short line crosses these, and a bulb is placed at each section; the small line is then removed the requisite distance, and another row put in. When the bed is planted, the strings are removed, and four inches of soil placed over the roots very carefully, so that none are displaced. *Hyacinths* should, if not already done, be potted or glassed immediately. For blooming in glasses, *use rain or river-water*, fill up the glasses until it will *just touch the bottom of the bulb*; place them in total darkness, and change the solution about once a fortnight; in doing this, hold the bulb in its place, and pour out the contents, filling up again as before. In a few weeks, the roots having advanced considerably, they may be removed to a window or other light situation. Those in pots should be placed side by side out-doors, and have old spent bark, or old rotted leaf mould, &c., spread over them to the depth of six inches; and when the flowering head is clearly seen inside its leaves, which, by examining, will be ascertained, then remove them into a forcing-house, or greenhouse, sitting-room, &c., placing them in full light. *Pansies*' straggling shoots may now be cut closely, leaving a joint above the ground, and hoops should be placed over the choicest beds, that protection may be given in the event of sudden frost. *Carnations* will require all the air and exposure possible in damp weather, avoiding continuous wet; when plants appear mildewed, sprinkle a little sulphur over and under. *Pinks*—occasionally stir between the rows of plants. *Dahlias* should be taken up, advantage being taken of fine days; secure the labels firmly. *Chrysanthemums* should be placed where they can be freely ventilated, as they ought not to be kept close or warm, or they would soon become drawn, and be attacked by insects.

IN THE GREENHOUSE, COLD FRAME, &c.

The proverbial dulness and dampness of the external atmosphere generally prevailing during this month is sufficient to induce more than the ordinary amount of care and attention. Ventilation on all favourable opportunities is therefore highly necessary, closing the sashes early in the afternoon, when a clear sky indicates frost; this precaution will often prevent the necessity of making fires in these houses. Give water sparingly, especially to plants which are impatient of wet, such as *Calceolarias*. *Pelargoniums*, and what are called *Scarlet Geraniums*, such as have been in beds and newly potted, should be kept *nearly dry* till they strike root afresh. For want of this care, vast numbers are destroyed. Repot show *Pelargoniums*.

IN THE FORCING PIT OR STOVE.

All hardy and half-hardy plants brought in for forcing should have a temperature at first of from 50° to 60°, to be increased up to 75° when more advanced; but as many plants will not bear such heat, and others will not do much good without a high temperature, there should be two distinct pits, or divisions, at least, for this purpose. The double Roman Narcissus is the first of the forced bulbs, and where they have been potted early in August they will now stand 60° of heat, and will

be in flower by the end of this month. Cyclamens that have made good roots will stand forcing for a short time, and will soon throw up their blooms; but, like bulbs of all sorts, they are injured by forcing *before their roots are made*.

Introduce Roses, Lilacs, Violets, Lilies of the Valley, and other plants, to bring them early into bloom. Chinese Primroses, sown last spring, should be encouraged, that they may blossom about Christmas. These are extremely subject to suffer from damp; they ought, consequently, to occupy a dry and airy situation during the winter.

BRIEF REMARKS.

PROPAGATION OF THE HOLLYHOCK.—Mr. Appleby, in the *Cottage Gardener*, details a method of rapidly propagating hollyhocks, as practised by Mr. Macintosh, of Edgeware-road. He observes, he took off the bottom side shoots, cut them into lengths, put them into pots filled with light soil, which he pressed down tight to each cutting, plunged these pots of cuttings into a gentle bottom heat, watering but little till they showed signs of growth, and soon had the satisfaction of finding his cuttings produce roots, which, as soon as he perceived, he potted them off into small pots, and kept them in a cold frame till they were well established and ready for planting out. But this was not all; the side flower-stems were cut off, and every joint, whether it had leaves or not, was cut off just below the joint, leaving about an inch of the stem above the joint. Each joint had a dormant bud, which, when isolated, and placed in shallow pots in a gentle stimulative, started into growth, and soon showed a shoot projecting above the soil; this, in time, as the leaves unfolded, pushed forth roots, and formed a plant. This method, with which we were much pleased, shows that wherever a bud is, it contains within itself the germ of an entire plant, which, when correctly managed, can be formed into a plant, equal in vigour, and in every way as perfect an individual as the plant from which it was cut or taken.

This propagation should, of course, be performed as soon as possible. Cuttings are not safe to put in later than August, because there would then be a danger of such very young plants being not carried safely through the winter.—*T. Appleby*.

STANDARD SALVIA FULGENS.—Recently visiting a nobleman's celebrated gardens, I was particularly pleased with a number of STANDARD plants of this rich crimson flowered salvia. They had been formed some years. The main stem was an inch and a half or more in diameter, quite hard and woody, and each stem a yard clear below the fine branching head. The plants were in magnificent bloom, and were growing in two rows, one on each side of a walk. Each winter they are taken up, protected, the heads cut back, and replanted in spring.—*Flora*.

BLACK BEETLES (*Blatta Orientalis*).—At a recent meeting of the Entomological Society, it was stated by Mr. Hunter, that the *black beetles*, so annoying in some kitchens and plant-stoves, are readily destroyed by giving them *pounded* plaister of Paris (gypsum) mixed with oatmeal. As all may not partake of the repast at any one time, follow it up at short intervals for a time. It will kill them.

CAPE BULBS.—Some one conversant with the subject would oblige me with immediate information as to what would be the best treatment for bulbous roots just received from the Cape of Good Hope. Some are of enormous size, three inches by five inches, and have started growing, though closely packed up, but no names attached to them.—*A Subscriber*.

GRAVEL AND GAS-TAR WALKS.—Noticing the detailed particulars on these, in an early Number for this year, I immediately had a considerable extent formed accordingly, and the result has been highly satisfactory. The walks were previously what are termed gravel-walks; but the cost of weeding was, for about two miles of them, a serious sum per annum, besides having to disturb the surface so much. Last April, however, I commenced operations in dry weather, of which we had a long continuance. I had the surface of the gravel swept and rolled very evenly. I then poured upon and spread the gas-tar regularly over it by means of the head of a wood rake, and as we proceeded bit by bit, I had some nice gravel sifted regularly and evenly over it, and soon the surface was as hard as

concrete, and the walks have been much admired, and entirely clean from that day to the present; not even *one* weed has appeared. The smell of the tar passed off in the course of three days, and the walks have the gravel-colour appearance, and are quite smooth. They are admirably firm and *dry* in all weathers; rain, &c., not affecting their firmness. The cost of one year's weeding was much more than tarring the walks.—*Senex, Yorkshire.*

THE SMELL OF NEW PAINT.—A bundle of old dry hay, wetted and spread about, presents a multifarious absorbing surface for this; especially if not on the floor only, but over pieces of furniture which allow circulation of air, as chairs laid upon their faces, &c. Large vessels of water, as trays and pans, are not uncommonly used, with good effect; but the multiplied surfaces of the loose hay give it great advantage. It must be kept wet, however, or at least damp, for the oily vapour does not seem to be readily absorbed unless the air is kept moist by evaporation.—*Gazette.*

COMPOST FOR THE VIGOROUS GROWTH OF CHOROZEMA.—The best for the *Chorozema* is rich turfy peat, broken small, and mixed with sharp silver-sand, small potsherds, or charcoal. The addition of one-fourth of turfy sandy loam will be an improvement for the strong-growing varieties; but strong adhesive loam should not be used, and the weaker varieties are longer lived in peat, although their growth will not be equally rapid at first.—*An Exhibitor.*

DESCRIPTIVE LIST OF GOURDS.—Having taken your "FLORICULTURAL CABINET" since its commencement, and not finding any account of the different kinds of Gourds, so highly ornamental in pleasure-grounds, I wish some of your numerous correspondents would give a descriptive list of what is eatable, and what poisonous, and what most curious (I have several, the Bottle, Coasbard, Powder-horn, &c., &c.), in your next Number, if you can.—*Feronia.*

MODE OF DRYING PLANTS.—The specimens intended for preservation, after having been kept in a press for a few hours, are placed in an apparatus called the coquette, in which they are exposed to the sun, or placed in a stove, or in an oven. The coquette consists of two open covers, between which the paper containing the plants is pressed by straps or other means. The best kind of covers are pieces of strong iron wire net-work fastened into frames made of light iron rod. These open frames allow the moisture to escape freely, while boards, or milled boards, absorb and retain it. The name coquette was given to this contrivance, partly on account of the beauty of the specimens prepared with it, and partly in remembrance of its inventor, M. Lecoq, Professor of Natural History at Clermont-Ferrand (*Journ. de Pharm. et de Chim.*). A pair of frames of this kind, with plenty of Bental's paper, leave nothing to be desired.—*Bot. Gazette*, ii. 55. [The same result is obtained by using wooden frames formed of laths secured together by cross bars, so as to leave small vacancies between the laths.]

ACCLIMATISING PLANTS.—I have given my continued best attention to the subject of acclimatising exotic plants at this place during the last thirty-five years; and I have made a written record of all the successful results during that time, some of which may perhaps be worthy of notice. *Richardia*, i. e., *Calla aethiopica*, in pots, produces much seed, of which I sowed some in the open ground in the end of March, 1822, in a vegetable mould, on a clayey subsoil, latitude 55° 55', altitude about 180 feet above the level of the sea. I put a broken one-light frame over it. In six or seven weeks several seedlings grew up, in all fifteen plants; here they continued to grow well until autumn, when I took them up with balls of earth, potted them, and kept them under glass all winter. One of these seedlings began to flower in thirteen months. In the spring of 1823 I planted it in the open border under a high wall with a western aspect, so that the sun did not shine on the plant till twelve o'clock; here it begins flowering in the end of May and June, and grows sometimes three feet high. One year it produced eleven flowers, and it has produced seeds. From 1823 it continued to grow and flourish, surviving the long-remembered severe winters of 1836-7-8; in the spring of 1838 it was first taken up; it was a large mass of roots, of which I replanted a portion in the same place, and it continues to grow and flower well. In October, 1851, I was compelled to take it up, owing to alterations; it had then a large cluster of green seeds. I cut the plant in halves, one of which is again growing in the same place under a wall, planted deep in cool loamy earth, in a shady, well-sheltered situation; and the part with seeds was put in a pot, and placed under glass. The cluster of seeds, half an ounce, ripened in the end of December, of which I sowed some in a pot on February 18, 1851, and raised twenty seedlings; they are planted now three in a pot, and one in a nine-inch pot; those planted three in a pot began flowering January 15, 1852,

in less than a year from the time of their being sown. By various ways of managing, the plants are in flower nearly all the year. Several are growing, and flower well in other plants; under walls, in this situation, it produced seven large flowers last June. The above plant has been twice transplanted, and has lived upwards of thirty years. I have found as many as eight seeds in one berry; the largest seeds produced the hardiest plants, and two varieties—major and minor. A seedling Calla, in a nine-inch pot, grew $4\frac{1}{2}$ feet high, and produced a large cluster of ripe seeds, which weighed $4\frac{1}{2}$ ounces. A plant, in flower last February, was $4\frac{1}{2}$ feet high, in a pot of rich earth, with sometimes two large twin leaves on one footstalk, and two columns in one flower; sometimes the flowers are double, so called here, with flowers seven inches wide; it is a graceful plant for a shady room or hall, or among statuary, &c. I have gathered two ounces of seeds in a year, besides the above.
—*John-street, Biel, East Lothian.*

SHACKLEWELL, STOKE NEWINGTON, AND HACKNEY AMALGAMATED FLORAL SOCIETY, Sept. 1. DEALERS.—24 Dahlias: 1st, Mr. C. Turner, with Mr. Seldon, Mr. Herbert; Princess Radzewill, General Faucher, Barmid, Leda, Fame, Sir F. Bathurst, Queen of Whites, R. Cobden, Seraph, Chancellor, Morning Star, Sir R. Whittington, Fearless, G. Glenny, Sir C. Napier, Queen of Lilacs, Scarlet Eclipse, Kant, Miss Shears, Dr. Frampton, Sir R. Peel, and Gem of the Grove; 2nd, Mr. Legg, with Anticipation, Nil Desperandum, Mrs. Seldon, Leda, Fearless, Carmina, Lady St. Maur, Duke of Wellington, R. Cobden, Marchioness Cornwallis, Sir F. Bathurst, Sylph, Thames Bank Hero, Magnificent, Utillia, Queen of Beauty, Roundhead, Mr. Herbert, Admiral, Mr. Seldon, Miss Newman, Nonpareil, Queen of Yellows, Summit of Perfection; 3rd, Mr. Hunt,—12 Fancies: 1st, Mr. Legg, with Lady Grenville, Mrs. Hansard, Princess Charlotte, Mrs. Willis, Belle de Payne, Jetty Treffz, Maid of Lodi, Saracen, Jenny Lind, Floral Beauty, Queen of Fancies, and Madame Bresson; 2nd, Mr. Turner, with Claude, Le Peon, Elegantisima, Lady Grenville, Princess Helena, Empereur de Maroc, Phaeton, Mrs. Hansard, Lord Lyndhurst, Duchess of Sutherland, and Jenny Lind. AMATEURS.—12 blooms: 1st, Mr. Holmes, with G. Glenny, Duke of Cambridge, Richard Cobden, Miss C. Bacon, Sir F. Bathurst, Miss Newman, Duke of Wellington, El Dorado, Jullien, Summit of Perfection, Marchioness Cornwallis, and Mr. Seldon; 2nd, Mr. Robinson, with General Fauchier, Ambassadeur, Queen of Lilacs, Mr. Seldon, Richard Cobden, Fearless, Sylph, Shylock, Nil Desperandum, Sir F. Bathurst, Roundhead, and Sir C. Napier; 3rd, Mr. Weedon, with Negro, Queen of Lilacs, Mr. Seldon, Model, Sir F. Bathurst, Leda, Fearless, Duke of Wellington, Blanchfleur, Nil Desperandum, and Gem of the Grove; 4th, Mr. Prockter, with General Fauchier, Fame, Duke of Wellington, Victory, Richard Cobden, Queen of Lilacs, Sir F. Bathurst, El Dorado, Fearless, Jullien, C. Turner, and Sir C. Napier. Six Fancies: 1st, Mr. Prockter, with Queen of Fancies, Miss Weyland, Mrs. Hansard, Spectabilis, Miss Bathurst, and Gloire de Kain; 2nd, Mr. J. Edwards, Holloway, with Elizabeth, Reine Pomare, Highland Chief, Miss Compton, Mrs. Hansard, and Jenny Lind; 3rd, Mr. James, with Princess Charlotte, Mrs. Hansard, Empereur de Maroc, General Cavaignac, Phaeton, and Triumphant; 4th, Mr. Humber, with Racheal, Flying Dutchman, Mrs. Hansard, Miss Compton, Mrs. Labouchere, and Floral Beauty. Six other collections were staged in this class, and it is worthy of remark that in every pan Mrs. Hansard was introduced, showing that this fine variety is becoming highly popular. Six new flowers: 1st, Mr. Robinson, with Morning Star, Queen of Whites, Phantom, Alice, Miss Ward (without the white tips), and Sir R. Whittington; 2nd, Mr. J. Edwards, Holloway, with Edmund Foster, Morning Star, Triumphant, Alice, Sir R. Whittington, and Dr. Frampton; 3rd, Mr. Holder, with Morning Star, Sir R. Whittington, Queen of Whites, Miss Ward, Sir F. Theisger, and Malvina; 4th, Mr. James, with Morning Star, Queen of Whites, Sir R. Whittington, Red Gauntlet, Douglas Jerrold, and Dr. Frampton. First Class Certificates were granted to the following six varieties, and an interesting exhibition was made by a specimen of each being set up in a regular board. We enumerate them as set up in the stand: Sir J. Franklin (Turner) previously described by us; Miss Matthews (Bragg) scarlet, tipped with white, a fancy flower remarkable for its depth; Bob (Drummond) a brilliant scarlet, deep, well-arranged, and fine centre; Miss Caroline (Brittle) a bluish flower in the way of Marchioness Cornwallis, but much thicker; Beauty of the Grove (Burgess) pale buff yellow with dark rosy tips, attractive, and with plenty of "stuff" to warrant good growth; Lord Byron (Pope), rosy salmon, new in colour, large smooth petal, of good outline. Other seedlings were shown possessing many excellent points, and foremost among these was Lady Dalrymple (Turvill), lilac bluish, boldly tipped with

purple; Plantagenet (Turner), rosy lilac, bold; Sir J. Paxton, dull yellow, inclined to colour on the edge; Lady Folkstone, bluish; Miss F. Mowbray (Union) a tricolor, dark yellow base, sides crimson, tip white; Marchioness Douro, clear yellow. Of other novelties, Mr. Edwards contributed a flower of a striped fancy seedling, colours scarlet and deep yellow, evenly balanced in regular stripes. The general opinion regarding this flower was that for form, centre, and petal, it is unequalled in its class. It was compared with Rembrandt and Spectabilis, flowers intimately in the way of it so far as colour is concerned, but much behind it in every quality constituting perfection; the praise bestowed on it was so unanimous, that it is intended to call it Unanimity (Edwards).

PELAGONIUMS DURING OCTOBER.—Mr. Dobson, in his excellent Treatise says:—By the beginning of October the plants (well-rooted cuttings in 2 and 3-inch pots, with their tops pinched off), may be again shifted, that is, if they are sufficiently strong, into 4-inch pots, keeping in mind the same treatment as was recommended in potting them off, except in stopping them, which must be done according to the time they are required to be in flower; June is the principal month. Plants, therefore, that are required for June should be stopped back about the second or third week in December, when they must be kept dry till the eyes are visible. As soon as they are sufficiently broken, they may be again shifted into their blooming-pots; a 6-inch pot will be quite large enough for an autumn-struck cutting, as the plants must not be making growth while they are in flower. They will require no more shifting till after they are cut down, when they may be prepared for making specimens.

MANDEVILLA SUAVEOLENS.—In a recent visit to the Botanic Gardens at Montpellier, I observed *Mandevilla suaveolens* growing over a trellis as a hardy climber. With a view to test the severity of the winter, I inquired what species of *Passiflora* flourished under similar treatment, and learnt that none but *P. cærulea* would live there out-of-doors; all others which had been tried had been killed by frost in winter. On my remarking that *P. cærulea* flourished in England, the gardener assured me that *Mandevilla* was decidedly more hardy; and that where *P. cærulea* flourished, he had no doubt *Mandevilla* would equally. In accordance with this statement, I observe that a branch of *Mandevilla* which has grown out through the roof of my greenhouse, is this day (October 18) in perfect flower, having been exposed about ten days ago to a frost which injured French-beans, *Convolvulus major*, caused the leaves of *Mangold-wurtzel* to droop, and so damaged flowers of *Passiflora cærulea* against a wall, that they did not expand. I should remark that the greenhouse is span-roofed, so that the *Mandevilla* was exposed both to wind and radiation without any protection whatever. I mention this to induce others to try *Mandevilla*, as I intend to do next year, against a wall where *Passiflora* flourishes. I may add, that the frosts at Montpellier are occasionally so severe that *Cupressus lusitanica* was severely injured, and Oranges and Olives killed outright. On the other hand, from the heat of the summer *Nelumbium* both flowers and seeds in a tank in the middle of the garden.—J. R.—*Gardeners' Chronicle*.

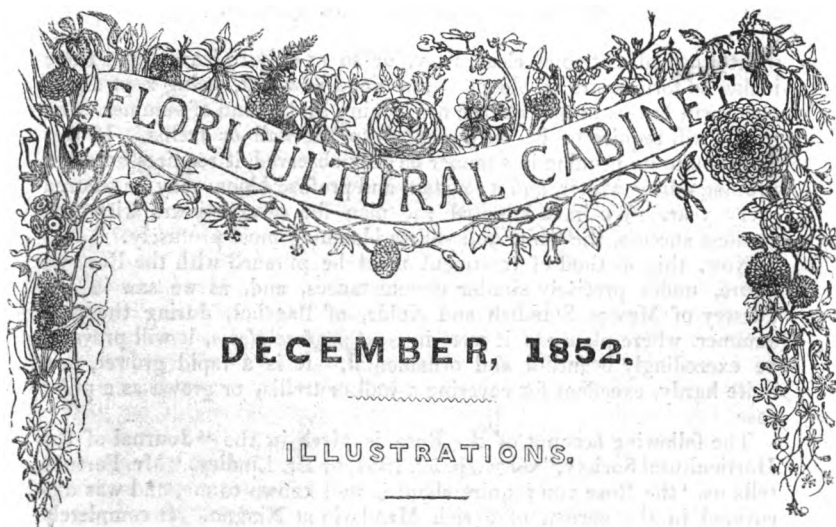
DIELYTRA SPECTABILIS.—The following is some account of, perhaps, the most splendid specimen of this Fumewort that has ever been grown in this country. The plant to which I allude was planted the year before last in the garden of a gentleman at Lexden Heath, near Colchester, and was then only a few inches high. During that and the last year it grew and flourished wonderfully, but this year it reached a size and form that very far surpasses anything of the kind that I ever heard of. In the middle of August it became necessary to cut it down, on account of its enormous size, to prevent it from destroying some neighbouring Roses, and it then measured upwards of 30 feet in circumference, and 5 feet in height. I have never had an opportunity of examining it closely, but I have constantly seen and admired it from the road in passing by, and I have repeatedly heard from one who has been inside the garden, that what I have here stated is entirely correct. I have also been told that between April and August it frequently bore upwards of 200 perfect spikes of flowers at once, and that it had not a single stem or branch broken by the wind, although in a very bleak and exposed situation. I should add, that it is planted in the richest artificial soil that can be made, and that in winter it is left wholly unprotected. In the flower-garden of the same gentleman there are also extraordinary specimens of the *Myoporum tennifolium*, the two sorts of *Vincas*, and of the new *Cantua depandans*; I have not seen them myself, but I am informed by good authority that they are of a size and form far beyond anything ever attained in any of our best-managed greenhouses, owing entirely, I believe, to the soil which is given to them.—*A Lover of Flowers*.

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Fortune's Double Yellow Rose.



FORTUNE'S DOUBLE YELLOW, or *Wang-jang-ve* ROSE.

THE Horticultural Society sent Mr. Fortune to China to collect plants, and along with other valuable ones he forwarded to the Society's garden, in 1845, was the highly ornamental "Climbing Rose," which we now figure. From the remarks that he communicated about the Rose, great expectations were entertained of its beauty, &c. Its subsequent culture, however, in our own country, in various places, proved very different; but few blossoms were produced, and those of inferior size. In consequence of such failures, after what had been described of its excellencies by Mr. Fortune, a considerable prejudice against the Rose has arisen. This has resulted, however, from the "improper treatment" which has been pursued with the plant. Our readers will recollect that the treatment in pruning the "Banksian Rose" is very different to that applied to the general Roses of our gardens; the former requires a *summer* dressing and pruning, but the latter require it in *winter*. Fortune's Yellow Rose must be treated similar to the Banksian, but the treatment usually given to the other class of Roses mentioned had been pursued with it; hence the failure and disappointment resulting. The Banksian Rose does not produce its flowers on the wood of the *present year's* growth as other roses do, but on the wood of the *previous year*, therefore the great object must be to obtain strong *well-ripened* wood of this season to supply the bloom of next year. The principal attention to effect this is to treat the Rose very similar to what is practised with the Peach-tree, as it regards its summer regulation of new shoots by thinning away the superfluous shoots, retaining only those which have bloom upon them, and a due proportion being left for the following year's bloom. Towards the end of April hand-dress the Rose-tree, when the shoots will be about four inches long. Again, in July or early part of August look over the Rose, and stop the leads by cutting away about one-third of each; and, not to have the

plant crowded, cut some clean away, or so as only to leave about three inches to form spurs of bloom. The wood now left, being kept nicely open, will have a proper chance of ripening by the end of summer. The shoots will require to be duly secured to the wall or trellis. If this attention to its pruning in summer be duly observed, it requires no other pruning during winter, and a constant and profuse bloom may be secured every year. We have adopted the plan for several years with the greatest success, the white and yellow blooming most profusely.

Now, this method of treatment must be pursued with the Rose we figure, under precisely similar circumstances, and, as we saw in the nursery of Messrs. Standish and Noble, of Bagshot, during the past summer, where plants of it were in *most profuse bloom*, it will prove to be exceedingly beautiful and ornamental. It is a rapid grower, and quite hardy, excellent for covering a wall or trellis, or grown as a pillar rose.

The following account of the Rose is given in the "Journal of the Horticultural Society," vol. vi., p. 52, 1851, by Dr. Lindley. "Mr. Fortune tells us, 'the Rose you inquire about is well known to me, and was discovered in the garden of a rich Mandarin at Ningpo. It completely covered an old wall in the garden, and was in full bloom at the time of my visit: masses of glowing yellowish and salmon-coloured flowers hung down in the greatest profusion, and produced a most striking effect. It is called by the Chinese, the Wang-jang-ve, or Yellow Rose. They vary, however, a good deal in colour; a circumstance which, in my opinion, adds not a little to the beauty and character of the plant. I fancy it is quite distinct from any other known variety, and certainly different from any China kind. It is admirably adapted for covering walls; and if planted in *rich soil*, and *allowed to grow its full size*, nothing can produce a finer effect in our gardens.'"

Had Mr. Fortune's directions as to its being allowed to grow without having its shoots shortened, we should have had this fine Rose some years ago flourishing as it now does at Bagshot with Messrs. Standish and Noble. To see it thus however, we must be content to wait till "gentle spring" and "refulgent summer" arrives:

"Come gentle Spring, ethereal mildness, come,
And from the bosom of you dripping cloud,
While music wakes around, veil'd in a shower
Of shadowing roses, on our plains descend."

THOMSON.

NOTES ON NEW OR RARE PLANTS.

BEGONIA XANTHINA.—Roots of this very handsome flowering species were sent to Mr. Nuttall, of Rainhill, near Preston, by Mr. Booth, from the Island of Bontan. It bloomed in the stove at Rainhill during the last summer. The flower stems rise about a foot high, each terminating in a many-flowered corymbose head of "*rich yellow*" blossoms, tinged at the back with red. The leaves (each) are about

six inches long, of a deep green above and red beneath. Each blossom is an inch across. It is exceedingly pretty, and merits a place in every stove. (Figured in *Bot. Mag.*, 4683.)

CLEISOSTOME CRASSIFOLIUM.—A stove Orchid, introduced into this country by Messrs. Veitch from the East Indies. The flower stem is about a foot high, and the numerous blossoms are produced in a panicle of short spikes; each flower being half an inch across. Sepals and petals greenish yellow, and the lip a rosy violet-colour. (Figured in *Paxton's Flower Garden*, plate 99.)

MALVA INVOLUCRATA (Synonyme, *Nuttallia involucrata*).—Seeds of this pretty flowering "*hardy perennial*" were sent from the Texas, by Dr. Engellman, to the Royal Gardens of Kew. The flower stems extend about two feet, lying upon the ground, the ends rising upwards, each bearing numerous blossoms, and every flower two inches across, of a deep red purple, having a large pale yellow centre. It is a charming plant for the flower-garden. (Figured in *Bot. Mag.*, 4681.)

MYOSOTIS AZORICA, the Azorean Forget-me-not.—This very pretty flowering plant we figured several years ago; it is a half-hardy perennial. It is a native of some of the Azorean Islands, where it grows about waterfalls, and on wet rocks having a north-east aspect. Its proper habitat appears to be on mountains following the course of rocky mountain streams, where the air is kept damp by the spray of the water. It blooms freely, and its racemes and corymbose heads of deep rich flowers, having a yellow eye, are very pretty. The plant does well during summer in the open bed, but must be in a rather shady place. It succeeds well too in a pit-frame or greenhouse, but must have a free air, or it will be drawn up weakly. If the tops of the shoots be pinched off early in the season, side shoots are produced, and the plant becomes bushy, and blooms in perfection. (Figured in *Paxton's Flower Garden*, 97.)

NYMPHÆA DEVONIENSIS.—This splendid Water Lily we recently noticed, when remarking on the figure of it, given in the *Botanical Magazine*. A fine figure of this noble flower is now given in *Paxton's Flower Garden*, 98th plate. It has been supposed to be an hybrid, produced by crossing *Nymphæa rubra* with *N. lotus*, but it is subsequently considered to be an hybrid between *N. rubra* and *N. dentata*. Each flower is about eight inches across, of a bright rosy crimson colour. The plant blooms very freely, and at Chatsworth was in blossom from April 12th to the middle of October, and even then had a fine succession of flower-buds. It is a very valuable acquisition, and we trust is the precursor to many other handsome hybrids. This class would be highly improved by the growers of water plants hybridizing with the finest kinds.

RUBUS BIFLORUS.—*Twin-flowering Raspberry.*—This very handsome Bramble has been obtained from Nepaul by Messrs. Veitch. It is quite hardy and very ornamental. The stems spring from the ground on clusters, like our common Raspberry, and attains a height of ten to twelve feet, erect, branched. The stems are very white, appearing as if they had been whitewashed. The flowers are produced in profusion, white, each blossom nearly an inch across; they are succeeded by well-

flavoured fruit, as large as a usual-sized Raspberry, and of a beautiful orange or deep amber colour. It is not valuable as an ornament for the shrubbery, but would be a handsome, agreeable-flavoured fruit for the table. (Figured in *Bot. Mag.*, 4678.)

GAURA LINDHEIMERI.—A plant belonging to the Clarkias, &c. It is a branching perennial herbaceous plant, growing three to four feet high, and blooming in profusion from July to October. The flowers are produced in long twiggy spikes, each blossom being an inch across; white or deep pink. It is easily increased from seeds, and is best treated as a half-hardy triennial. It does not flower till the *second* season. If seeds be sown so as to get plants strong enough to endure winter, and being turned into beds in spring, will bloom that season. It is showy for a border of mixed plants, or the skirts of a plantation.

HELIOPHILA PILOSA (Cruciform Order).—A hardy annual from the Cape of Good Hope. It grows about eighteen inches high, and the flowers are produced in terminal spikes, of a bright blue, and each blossom half an inch across. It is a charming ornament for the borders in summer, and seeds freely. It is also called *H. arabidoides*.

PELARGONIUM FOLIOLOSUM.—This is one of what are usually called "Cape Geraniums," Mr. Wicks, a collector of Cape plants, introduced it into England. It is one of the fleshy-rooted species. The flowers are produced in umbels, six or eight blossoms in each; they are of a *pale yellow* colour. It will be valuable as a breeder, from which some of our light flowers may be impregnated, and larger *yellow* blossomed varieties be obtained. All the Cape Pelargoniums require to be grown in a good, rich, sandy soil, and to be kept *dry* in winter. This yellow-flowered species, we understand, is in the Horticultural Society's garden at Chiswick.

HEINTZIA TIGRINA.—Mr. Karstan discovered this noble Gesneras-like plant in shady situations on the mountains of Caraccus, where it grows *five or six feet* high. The leaves are one foot long. Each blossom is about two inches long, the calyx being of a rich rose-colour, with a green rib in the middle of each sepal. The corolla is pure white, with numerous blood-coloured spots on the expanded portion. It is a fine species, and will become one of the best stove plants. It requires a similar treatment to the Gesneras, Gloxinias, Sumingias, &c. It is in Mr. Van Houtte's collection, in Belgium.

SALVIA REMERIANA.—A native of the Texas, where it grows in the woods. It is a half-shrubby plant, and with us a half-hardy one. The flowers are produced in very long spikes, rather small, of a rich crimson colour. It is in the Chelsea Botanic Garden, and grows about two feet high.

LILIUM GIGANTEUM.—This noble Lily, growing to the height of ten feet, we find will endure without injury in the open ground, having a covering of dry leaves, or ashes over the roots in winter. It ought to be grown in every garden.

LILIUM BROWNII.—A hardy kind, having large trumpet-shaped flowers, white, with the outside marked with bronze-purple.

LILIUM LONGIFLORUM.—The flowers are large, trumpet-shaped, pure white.

These Lilies, with all those of *Lilium lancifolium*, which are quite hardy, should now be procured and planted immediately for next year's blooming.

Plants in bloom in the Royal Gardens at Kew.

LAPAGERIA ROSEA.—In June, 1850, we gave a figure of this very handsome flower, but it was drawn from a flower produced by a weakly plant. A plant has been grown in the Royal Gardens, out-doors, trained against a wall, where it showed for bloom; being late in the summer, it was taken up and removed into a cool house, appropriated for Ferns, and there trained to the back wall, the roof sloping to the north; the face of the back wall is shaded from the sun, and cool; here it has bloomed charmingly. Each flower is "trumpet-shaped," and the tube four inches long, with the expanded mouth downwards; thus drooping, such large flowers have a very interesting and pretty appearance. They are of a bright rosy-crimson, with the inside beautifully ornamented with numerous white dots. Handsome as was the flower we figured, to which we refer our readers, the flowers at Kew are much superior. It is a native of Chili, an evergreen, half-shrubby plant, adapted for training to a pillar, wall, or wire-work frame. It highly merits a place in every Greenhouse or Conservatory, or trained against a wall. The plant is a free bloomer, and one of the finest that has been introduced for many years.

GYNERIUM ARGENTEUM.—This is the celebrated "Pampas grass" of Brazil. There is a noble specimen growing in the open bed in the Royal Gardens, having about thirty flower stems, nearly four yards high, each terminating with a feathery-looking panicked head, two feet long, and of a beautiful silvery appearance. The plant is very numerously furnished with leaves, which are about nine feet long, narrow, and deeply saw-toothed on both edges. The plant requires a rich, deep soil, and to stand alone in an open situation. Its bushy mass of fine leaves, and its magnificent floral stems, present a noble appearance.

GLOXINIA MACULATA.—There are several fine plants in bloom in the stove; one had seven spikes of flowers, three feet high, and the centre spike had had thirty flowers upon it. It is not only a noble growing plant, but its French-white, stout blossoms, with a dark blotch in the inside, are very handsome. It continues to bloom for several months, and if treated with a view to succession, two plants would, started at different but distant times, supply flowers all the year. It merits a place in every stove or warm greenhouse. If the plant be started in a hotbed frame, and retained there till it is a foot or more high, it may be removed into the greenhouse to bloom.

ERANTHEMUM MONTANUM.—A neat bushy plant, blooming freely. The tube of each blossom is three inches long, white; the end (limb) is five, parted an inch and a half across, of a pretty French lilac colour. It merits a place in every stove.

CYPRIPEDIUM venustum, *C. insigne*, and *C. barbatum*, are in beautiful flower in the stove. These "Ladies' Slippers," are particularly interesting; the singular form, in varied colours of green, with,

yellow, brown, and purple, render them, too, very handsome. They bloom freely throughout autumn and winter.

JUSTICIA SPECIOSA.—This is a showy, winter, blooming, stove-plant, its profusion of rosy-violet flowers are very gay. It forms a neat bush.

TURNERA ELEGANS.—A neat-growing stove-plant, blooming freely. The flowers are funnel-shaped, of a pale yellow colour, having a band of deep yellow, which encircles a black centre; very pretty through winter.

In the Greenhouse.—**ACACIA OLGEFOLIA.**—A neat plant, with oval leaves about an inch long. The large globe flowers are produced in long spikes, of a deep yellow colour. Blooming thus early renders it more valuable too. It deserves to be in every greenhouse.

ACACIA UNDULGIFOLIA.—Small, waved, neat leaves. The flowers are in small globes, of a bright yellow; pretty.

LASIOPETALUM EROSUM.—A bushy plant. The flowers are in form like those of the potato, lilac, with black anthers, pretty, and are in profusion. It blooms through winter, and well merits a place in the greenhouse.

LABECKIA LANCEOLATA.—A stiff, bushy plant, with bright yellow (Cistus-like) flowers, each blossom an inch across.

LOBELIUS.—Numerous pots of the dwarf-creeping kinds were now in profuse bloom; their bright blue and white flowers had a very pretty appearance.

LOTUS LUTEUS.—Plant similar to the well-known dark-flowered in appearance, but the flowers are a bright yellow, and pretty for winter bloom.

CHOROZEMA FLAVA.—A neat plant, *now* blooming freely. The flowers are of a "bright yellow," with a "white keel" half an inch across. It is very pretty, and merits a place in every greenhouse.

MALVA BILOBA.—A neat shrub, blooming very freely; the flowers are white, an inch across; it appears likely to bloom all winter; it has a cheerful appearance.

THOMASIA STIPULACEA.—A bushy shrub, with a profusion of potato-like flowers, each an inch and a half across; a pale lilac, with a black eye of anthers; pretty.

VERONICA ANDERSONI.—A pretty flowery hybrid. The plant is not such a robust-growing shrub as *V. Speciosa*, but has long spikes of rosy lavender-coloured flowers; at this season some of the spikes are white.

In the open border, under south, east, and west aspected walls, there are numerous patches of *Oxalis Roseus* in profuse bloom. It is a pretty plant for the season. Also *Verbena Geranifolia*, on the same borders, forms a close broad bush, three feet high, and blooms profusely. The flowers, in heads, are of a most beautiful deep rose-colour. It is a charming plant for autumn bloom out-doors, and in pots would be very ornamental for the greenhouse no doubt through winter. Its pretty jagged, geranium-like foliage has a neat appearance.

The following **BERBERISES** are very fine kinds:

B. Leschenaultii.—It is an evergreen, each leaf being about fifteen

inches long, having eight pairs of leaflets and a terminal one. It is a most beautiful species, and deserves to be grown in every shrubbery.

B. Nepalensis.—An evergreen, with light green, large foliage; each leaf having five pairs and a terminal one, with a few strong dentations on each,

B. tenuifolia.—Evergreen, leaves long, with five pairs and a terminal one; smooth, willow-like. Very neat.

In the Stove.—*Achimenes Hillii*, a hybrid raised here. Its growth is much like a *Gesnera*, the flowering stem being a yard high, and nearly the whole of it bears blossoms. The leaves are in pairs, and from the base of each five flowers are produced, on rather long footstalks. The tube of each blossom is an inch and a half long, outside scarlet, and the inside of a deep golden yellow, the end (limb) is spotted with red. It is a charming variety, and, like *A. picta*, appears to be admirable for autumn and winter flowering.

VARIATION IN PLANTS.

BY DR. MORREN, PROFESSOR IN THE UNIVERSITY OF LIEGE.

ANCIENT physiologists considered variegated leaves, as well as those having a naturally yellow tinge (when they are generally green in the same species), as particular diseases, which they classed among cachexies, and to which they gave the name of vegetable jaundice. It was not precisely that etiolation which is produced by the absence of light; for if the spotting were a jaundice, etiolation would be attended by chlorosis, or paleness. Variegation has continued to be held as a symptom of disease; neither have the researches which have been made respecting it been attended with any amount of positive information, as to the cause which produces this phenomenon, and especially on the nature of the tissues deviating from their habitual colour. The experiments of Knight on the fertilization of a White Chasselas, and a White Frontignan, by a Vine from Syria, led to the opinion that the variegation might be the result of hybridation, seeing that plants having variegated leaves were obtained by this operation in the instance alluded to. At the present day, when we possess new and more ample details on the streaking of flowers, and on the influence which the variously-coloured pollen exercises in the production of corollas with numerous tints, it would seem still more reasonable to believe that the variegation of leaves in plants raised from seed is indeed a phenomenon of which the first cause has its source in fertilization. But it may be remarked, that the production of a branch with variegated leaves, on an old tree whose leaves are of the usual green, materially invalidates this opinion. Even in plants raised from seed, variegation is a phenomenon sometimes so local that it appears at first absurd to seek the cause of it beyond the organ or part on which it is present. Take, for example, the *Oxalis acetosella*, on plants of which are sometimes found, among a good number of leaves quite green, one or two presenting a beautiful variegation; that is to say, a yellow reticulation on all the nerves and veins of

the three obcordate folioles. In this case, the phenomenon is evidently quite local; and we shall, by-and-by, demonstrate the organic cause of variegation, this fact will be established beyond all doubt.

In 1830, M. Schlechtendal gave a long enumeration of variegated plants—a list of which is of considerable interest to horticulturists—since these “sickly” plants have excited, sometimes, a singular mania among amateurs, which has so often been turned to advantage by the trade. Miller relates, that in his time, when the variegated hollies were introduced to England, they excited so great a passion, or “rage,” that all other plants seemed to be forgotten. We have, ourselves, known an amateur of Liege, who was so fond of these variegated hollies, that he left an order in his will to have a collection of them planted over his grave, and his heirs have religiously fulfilled his wish.

M. De Candolle, who is of opinion that all plants may present variegation, hesitates to class this phenomenon among those of physiology. To him, it appears sometimes a capricious monstrosity, allied to the reproduction of seed,—to hybridation; sometimes a resemblance of atavism. According to the same author, it would still be a spontaneous production, as in the singular case cited by Hales, and since referred to by numerous authors, in which a variegated Jasmine, grafted on a common one, was stated to have communicated its variegation to the leaves below the graft, a circumstance which would be extraordinary. M. Moretti, cited by M. De Candolle, would appear to have concluded from this fact that the variegation is a malady which is capable of being transmitted in all directions in the tree. The physiologist of Geneva, in speaking in another place of variegation, only mentions the yellow and the white, regarding these colours as original, primitive, and preserved in one part, while the green is developed around it. This view is, indeed, admissible as far as regards these tints; but not for the red, brown, or rusty colour, or even the white, which is found in those varieties of variegated trees which horticulturists designate tri-coloured. On a *Euonymus europæus*, with leaves margined with white, we have seen, it is true, that the youngest leaves, which were scarcely green, were already white at the margin, so that this margin quite preserves its original tint, that which it acquired at its first formation; but on the *Acer*, the *Cratægus*, &c., where we find red markings, these are of a subsequent formation, and do not indicate a primitive tint; it is evidently a colour which has been acquired. Moreover, we may add, that on *Piper verticillatum* we have seen the leaves developed green, and grow to their usual size with that colour; then, by-and-by, the nerves turned white, so much so as to present, when old, that variegation which we have designated under the name of reticulated variegation.

M. De Candolle remarks, that endogenous plants present pale longitudinal bands parallel to the nerves, while oxogenous ones have more irregular spots; a circumstance easily explained by the difference of the system of nervation in the two great orders of plants. This writer further adds, that these bands, or these spots, belong to parts in which the chlorophyll is not perfectly developed, either in quantity or quality, to be rendered green by the action of the sun. The direct cause of this

phenomenon, says this physiologist, is entirely unknown. It is just this cause that we wish to discover.

We must, however, before detailing our observations, render full justice to the labours of M. Treviranus, of Bonn, who, in this investigation, as in many others, has thrown much valuable light on his subject. M. Treviranus first remarked, that in monocotyledons the variegations form bands parallel to the nerves; in dicotyledons, as in *Carduus marianus*, the white is produced on the nerves, while, in other cases, as in *Aucuba japonica*, the yellow spots are distributed without order. He also made the important observations that sometimes the variegation is visible on the upper face of the leaves, while the under face has none; and by examining a section, he discovered that the parenchyma of the first is only achromatic or colourless. Again; the whitened part is thinner than the green part, and the small cells are destitute of the green granular substance (chlorophyll), which causes them to appear like white spots aggregately presenting a pale surface. M. Dutrochet held that they only derive their white tint from the air which is contained in the pneumatic cavities. We believe, also, that M. Dutrochet attributed to this air, enclosed in the pneumatic cavities, all the forms of variegation. This view, however, though in part agreeing with the truth, is partly also opposed to the facts, as we shall show. It is true in this sense, that the variegation, as the natural white spots in *Trifolium pratense*, *Arum italicum*, *Pulmonaria officinalis*, *Begonia argyrostigma*, &c., are caused by the air, or a gas; but it is not true in this sense, that it is pneumatic cavities (lacunæ) which enclose that air. Because a leaf is deprived of its white spots by submersion in water, and the extraction of its air by the pneumatic apparatus, M. Dutrochet concludes that that air exists in particular cavities. We are not of this opinion, because the microscopic study of the plants we have just instanced has proved to us that that air sometimes exists in the minute cells (cellulæ), and sometimes in intercellular passages (méats). The cavities in leaves are found, as is well known, especially in the inferior mesophyllum (the inferior system of the diachyma), and it is not this inferior surface which presents these spots, and other markings in particular: on the contrary, the superior system of the diachyma, or the superior mesophyllum in which the cellulæ are prismatic, much compressed against one another, and filled with chlorophyll granules, is the surface especially on which the albine discoloration is almost always found: it is the non-lacuniferous portion. The phenomenon cannot, then, be considered according to M. Dutrochet's view.

M. Treviranus offers better reasons for regarding variegation as a true malady produced from weakness (astheny); for plants which are variegated with white and yellow, grow more slowly, are more susceptible of cold, more readily acted on by frost, and a humid atmosphere; they flower less profusely and less frequently than other plants, nor do they bear fruit so often or so plentifully. He observes, however, that there are species in which, notwithstanding their variegation, vegetation is vigorous, as in the *Aucuba japonica*. He also remarks that *Pulmonaria officinalis* grows in several localities without spots, and that *Lamium maculatum* has its first leaves in spring spotted with white,

while these spots disappear in summer. We believe that this phenomenon is of a different nature to that of *variegation*, and that it is not dependent on the same law. We have studied the *spotting* of leaves with some care, and we have seen, indeed, that this phenomenon is of quite a different kind to that of *variegation*, both in respect to the plants in which it is found, its anatomical cause, its position, its physiology, and other incidental circumstances.

M. Treviranus observes, in respect to *variegation*, that Nature alone can produce it, and that art cannot accomplish it. But he is contradicted in this by M. Sageret. Art preserves and propagates by budding, layering, or grafting what Nature has produced. But it is difficult to determine the cause of *variegation* in a tree growing in a forest, when the others surrounding it, growing in the same soil, the same air, and light, have none. To this reflection we may add, that those who think that *variegation* is always traceable to an initial etiolation, preserved and propagated afterwards to the neighbouring organs, cannot maintain their opinion with any advantage; for it is by no means rare to find light, or partly white leaves on the *Rubus*, growing where it is fully exposed to the sun. We know an instance near Liege, of an *Æsculus Hippocastanum* having a branch with variegated leaves; this branch grows exactly at the south side, and is not shaded at all by the other branches, or the surrounding trees. Miller also cites a curious case: as is well known, there is a variety of *Sempervivum arboreum* with leaves margined with white; this was first obtained at Badminton, the seat of the Duke of Beaufort; a branch accidentally broken and detached from the species with green leaves, after having been a little dried, was planted; and on beginning to grow, it was found to have the new leaves variegated. Notwithstanding the authority of Miller, the fact mentioned seems to require confirmation. M. Treviranus regrets that the soil in which the shoot was planted has not been described; for there are some facts which indicate that here the soil exercises a very remarkable influence. Burgsdorf, cited by M. Treviranus, relates the following:—"Certain snails had [partially] eaten the cotyledons and the bark of a Beech; but it survived this mutation: the second year its leaves were variegated; the third year it was transplanted into a better soil, and there, by degrees, lost its variegated leaves. The Professor at Bonn made several observations, from which he affirms that trees with variegated leaves, by being transplanted from a poor to a rich soil, return to a uniform green; so that, according to his view, this phenomenon is connected with a particular debility in the vegetable juices, brought on by a diminution of the absorption in the root, and which does not permit the parenchyma to assume the green colour by the influence of solar light."

Such are the facts and such is the theory cited amongst the best physiologists of the day, with the exception of the memoir of M. Sageret, of which we shall speak hereafter. Owing to peculiarly fortunate circumstances, we have been able to study the phenomenon of *variegation* under a general point of view. Messrs. Henrard and Son, nurserymen at Liege, have been interested in variegated plants for upwards of thirty years, and have collected in their establishment at

St. Walbурge every variety of tree, shrub, and herbaceous plants with variegated leaves, which they have been able to procure. Their nursery thus forms a real botanical hospital, in which, however, far from trying to cure maladies of paleness and astheny, they rather endeavour, by all means, to increase their number, and preserve them.—(From *Dodonæa, Observations Botanique.*)

A NOTE ON VARIEGATED PLANTS,

BY MR. J. R. TANTON.

AMONG the numerous sections of plants grown for decorating purposes, the "variegated-leaved" rank as one of the most interesting and beautiful; and I think the fine collections of them which were brought to the Chiswick and Regent's-park Exhibitions the past season most fully confirm, forming as they did a very striking and handsome contrast to the general showy flowering classes; therefore, without presuming to dictate what will be admitted into or rejected from general estimation, I hope to be allowed to offer a few remarks in behalf of these useful and truly beautiful plants.

Every person connected with the Horticultural world knows what very valuable plants they are at this season, and likewise throughout the winter months, for decorating our glass establishments. Taking the stove into consideration, what looks more cheerful than a variety of variegated foliage intermixed with the few flowering plants that are afforded us at this dreary season. There are a few species of the Crotons deserving a place in every stove; likewise several of the Gesneras, the *Echites picta* (*Campylobotrys discolor*), *Justicia picta*, *Spiranthes cerine*, and a many of the Bromeliaceous order, not excluding the beautiful striped "Zebra-plant" (*Calathæa Zebrina*). These, and a host more, too numerous for me to be allowed to mention here, will bear the temperature of our plant-houses, from the stove down to the hardy house, where intermixed with various other plants, cannot but be admired. The hardy variegated plants for the decoration of our lawns, boundaries of flower-gardens, belts, &c., are but very limited; but though it is so, I hope they are not totally forgotten by our Horticulturists. A few of these valuable plants used for "bedding purposes" would be found a great addition to the ornamenting of our gardens.

I am glad to have to state that a new and very valuable variegated-leaved plant (a charming acquisition) has been brought to my notice, and which will be offered to the public next spring, viz. the *Daktia* (*Maculatæfolia*), whose golden-blotched foliage contrasted with the pretty rose-coloured flowers, having the petals very distinctly striped with bright red in the mamer, but better formed, will be the admiration of all beholders of D. La Rosea. This very beautiful plant was raised last year by Mr. John Cordery, an amateur Florist, of Pound-place, who, in communicating to me, states "that plants have this

season been grown in six different localities, in order to test its variegated properties," which he now finds to be quite constitutional with the plant, and under these varied circumstances it has proved all that could be desired. It is certainly one of the most strikingly handsome variegated plants that has yet appeared in our flower-gardens, and I beg to recommend it to all lovers of ornamental variegated-leaved plants.

In conclusion; I am so fully satisfied with the beauty and interesting appearance of a collection of this section of plants, that all who may grow even but a few species or varieties of them will not only approve of, but become increasingly pleased with them; and of course as the specimens increase in size, so they will in proportion become ornamental, and objects of universal admiration,

THE GENUS *ÆSCHYNANTHUS*,

BY MR. J. R. TANTON.

THE British cultivator of plants when called upon to exhibit his skill, urged by the stimulation of honourable competition and reward at those meetings now so widely spread and so highly beneficial throughout the land, soon found that the *Æschynanthus* was well suited to his purpose, as presenting a pleasing aspect in exact proportion to the care bestowed upon it, and thus evincing most accurately his own capacity for the distinction aimed at. Plants of this genus are invariably seen at all the summer and autumn exhibitions and meetings of the votaries of Flora; and their beautiful habit presented on those occasions has so captivated beholders, that their culture has been carried into establishments where exhibiting at the public shows has not been thought of. All the species and varieties of *Æschynanthus* are beautiful, some exceedingly so, rendering them essential to every stove collection, and will most amply repay for any care and management required. As may be supposed, amongst an assemblage of plants so extensive as occurs in this genus, there are some less deserving of regard than others; those considered the best, however, I shall enumerate below.

It is not long since a common error prevailed in the idea, "that air plants, and others of resembling character, were mainly inhabitants of the depths of the thickest forest;" and hence arose the practice, in our own country, of providing them with a dense shade, as being essential to their successful culture; but a better knowledge of the "physical geography" of the countries whence they came, and a more careful attention to the habits of the plants, have brought about the results to be expected, and the production of flowers is now as much a matter of certainty as before it was precarious.

The Indian Archipelago, and particularly the Islands of Borneo and Java, appear to abound with these plants, where they flourish in company with, and in the same manner as, the "Epiphytal Orchids." Dead and living trees, on the *margin* of forests, are clothed with them, and many trees are laid prostrate with these and similar vegetable

beings ; therefore, with a little before-consideration, the cultivator will not find any difficulty in the successful cultivation of the entire genus. All the kinds are of the easiest cultivation and propagation. Pieces of the young wood, from three to five joints in length, taken off any time in spring or summer, strike root with facility when potted in sandy peat, covered with a bell glass and plunged into a moderate bottom heat. If this be done in April or May, the cutting will have emitted roots sufficiently to be separated, and potted off singly in three weeks or a month ; potting them in sixty-sized pots, with a good drainage, well covered with moss and then filled up with "fibry sandy peat," intermixed with rotten wood and charcoal, broke or cut very fine. Pot the plant very high, so that the base of the stems be a little higher than the rim of the pot ; give them a gentle watering, and return them to the bottom heat. During the remainder of summer, a mean temperature of 80°, with abundance of moisture, should be kept about them. The tips of the shoots should be pinched off, to render the plants bushy. As it regards watering, it is not the drenching from the water-pot that is wanted, but produce moisture in the *form of vapour*, as those plants derive as much nourishment through their leaves as from the roots. The best means of supplying them in the requisite manner, is to plunge the pots into the back bed of a stove, and cover with a hand-glass ; or in a hot-bed frame, and cover in the same way. This prevents evaporation, and by keeping a close, damp atmosphere, renders a slight syringing once or twice a week sufficient. By continuing this mode of treatment till autumn, the plants will have grown considerably, and by the arrival of dull weather will have become dwarf bushy specimens ; they are then to be kept *dry* and *dormant* till spring.

The majority of the species, if left to their natural impulse, will bloom through autumn and winter, therefore those required for blooming in summer should be started in January, but those that are desired for a later blooming should be started the beginning of March. As they have hitherto been in small pots, it will be necessary to re-pot them, but they should be plunged in a brisk heat a fortnight or three weeks previous, and water sparingly so as to excite the roots a little before repotting. Avoid a large shift, and use the following compost. Rough fibry peat, charcoal, moss and rotten wood, with a little sharp silver-sand added ; also have a liberal drainage. Keep the base of the stem level with the rim of the pot. During the next three or four months they should be grown as fast, having a mean temperature of 80°, and abundance of moisture. Through the first half of this time the shoots should be kept stopped, which will increase their number as well as the flowers.

By the middle of May the earlier plants, being from six inches to a foot in length, must be allowed to cease their activity, and water must be gradually withheld, and the plants be freely exposed to the air. When quite ceased growing, place them on a sunny shelf in the stove, giving little or no water till they have set their flowers, which may be expected in the course of a month, and then they may be more liberally watered to bring out the blossoms vigorously. When their floral

beauty is past, let them again sink into a dormancy till the returning season for growing.

The later plants will require similar treatment, and the absence of sunlight, to ripen the wood, must be compensated for by an *entire* withholding of water.

The following are a few of the best kinds we possess in this country :

ÆSCHYNANTHUS BOSCHIANUS.—A native of Java, introduced in 1844, with nearly heart-shaped leaves. Flowers, about an inch and a half long, of a rich-reddish scarlet. It succeeds well, grown in a basket suspended from the roof of the stove.

Æ. LOBBIANUS.—A native of Java, introduced in 1845, of stronger habit than the above-named, and the flowers are much larger, of an orange-scarlet.

Æ. RADICANS.—A native of Java, introduced in 1845. Flowers of a deep red. It succeeds well, like *Æ. Boschianus*, grown in a basket.

Æ. MINIATA.—A native of Java, introduced in 1845. Flowers of a deep vermilion colour, with a blotch of yellow in the throat. A most abundant bloomer.

Æ. PAXTONII.—A native of Klossa. Flowers of a deep scarlet. Introduced in 1839.

Æ. HORSFIELDII.—A native of Java. Flowers of a deep orange. Leaves nearly circular. Introduced in 1845.

Æ. ROXBURGHII.—A native of the East Indies. Flowers of a rich scarlet. Introduced in 1837.

Æ. PULCHER.—A native of Java. Flowers of a rich vivid scarlet. Leaves very large. Introduced in 1845.

Æ. SPLENDIDUS.—This is a most beautiful hybrid, raised by Messrs. Lucombe, Pince, & Co., of Exeter, between *Æ. Grandifloras* and *Æ. speciosus*. It is one of the erect growers and a most abundant bloomer, a large bunch of flowers being borne on every shoot; they are of a brilliant orange-scarlet. It flourishes, too, in the greenhouse. Its beauty is not equalled by any other kind, and it ought to be in every greenhouse.

Æ. SPECIOSUS.—A native of Java. Flowers large, tube of a rich yellow, with a scarlet mouth; very handsome.

The above are free bloomers, easily cultivated, and highly ornamental, and by having a stock of plants, growing them so as to be in succession, blooming plants can be had all the year. They are at all times charming blooming plants, but more especially so as they blossom so freely through autumn and winter.

THE QUEEN OF WINTER,

BY MR. H. STILWELL, PINE-APPLE PLACE NURSERY, LONDON.

THE best compost for the *PRIMULA SINENSIS*, the *CHINESE PRIM-ROSE*, and the most successful mode of treatment in its cultivation, is as follows :

The best time for saving the seed I must leave to the judgment of

the grower. A few years since we thought August a good time to sow the seed of this charming plant, but now we find that the "time of sowing" is not the all-important thing, but how to get "early and fine plants" is the principal requirement.

Eagerly sought for by gardeners and other growers generally, we find, as we travel through the country villages, these pretty blooming plants gladdening the eye of the traveller by the way-side. Again we see the cottager's window clad with their pretty pink-and-white blossoms; but although we see them thus here and there, and almost everywhere, yet we find, in nine instances out of ten, the plants have not the compost suitable for their growth, and to produce the beautiful display they are capable of, and would realise, if grown in one that suits them.

The compost which I have found them succeed in *best*, "in fact, much superior to any others I have seen under any other circumstances," is as follows:—Three parts of good yellow loam, and the remaining *one* part to consist of equal portions of well decomposed cow-dung, and sharp grit from the road-side; these well mixed together, and having a good drainage, will answer every purpose the grower may require, whether for market or private display.

It is a great mistake, which many growers of the *Primula* have fallen into, who conclude that the plants cannot be well grown without being in peat soil, leaf mould, and silver sand. In this kind of compost I grew the plants till about six years ago, when I called upon a friend who was a *Primula*-grower for market, and was shown the soil he grew his plants in in such an admirable manner, which fine stock I had the privilege also to see. From that time I never had a plant under my care grown but in the compost first described.

The first season I grew them in that way my employer said he never saw such beautiful plants before. At Christmas the plants were shifted into No. 16-sized pots, and were eighteen inches across.

I find, in shifting the plants into larger pots, it affords two advantages; first, I get three times the quantity of flowers I should have done from a small plant; second, the plants last till March. When done blooming they are set out to themselves, and from them the most superb seed is collected.

The *Primula* requires to be kept very cool, and shaded from hot sun. A pit or frame is most suitable to have them in, from thence they can be transferred to ornament other places, as the greenhouse, conservatory, sitting-room, &c.

In order to have a good and extended supply of these charming flowers, seed should be sown at three different times; viz., first sowing on June 10th; second, on July 10th; and the third on August 10th. Thus autumn, winter, spring, and summer, can be adorned with these lovely flowers. Plants just showing their first blooming heads, being turned out into the open bed early in May, make a beautiful display in Summer, and a later race of young plants turned out in July, bloom well in Autumn.

DESCRIPTIVE LIST OF STOVE AND GREENHOUSE VARIEGATED-LEAVED PLANTS.

THESE most interesting plants are now attracting much attention ; and as a guide to persons desirous of procuring such, we insert the particular descriptions of the most ornamental which have come under our notice. Great care has been taken in having correct particulars.

CISSUS DISCOLOR.—It is a climbing-plant of great beauty, and succeeds admirably around a wire framework or pillar. The young shoots are of a dark red colour, and the long tendrils are of a deep rose. The leaves are from 6 to 8 inches long, and from 3 to 4 broad, tapering to a point. The under side is of a dark reddish purple, and the colours of the upper surface are disposed as follows :

First, there is a velvety band, with an undulating margin down the centre, of a rich violet-purple colour, covering about one-third of the surface, widest at the base, and tapering to a point. From this branches forth smaller bands down the side ribs, olive-green, and becoming beautifully interlaced at their extremities. The spaces betwixt these ribs are raised, giving the leaf the appearance of having been embossed, and in colour a silvery pearl-white. With the young leaves there is a slight tinge of lake near the central band. The entire leaf has a narrow margin of lake. These large and truly beautiful leaves have a peculiar "metallic" hue, and it is by far the most strikingly handsome variegated-leaved plant that has been introduced into England.

DRACENA MACULATA.—A very pretty plant, each leaf being about 8 inches long by 3 broad, of a dark olive-green, with very distinct spots of *bright green*, and in the centre of each is a dark dot. The leaves are very thick, and very beautifully marked.

DRACENA FERREA VERSICOLOR (Synonyme, *D. terminalis*).—This is an erect growing plant, and if allowed to proceed without the lead being stopped, would, no doubt, become several yards high. Small plants, however, will bloom, and by stopping, the plant may be formed to a bushy one of three or four feet high ; but whether it has but one head, or several, it is a most beautiful object, and highly ornamental. The leaves are somewhat in the form of those of a *Canna*, each being, when full grown, from eighteen inches to two feet long, and from six to eight broad. We recently saw a plant about five feet high, the stem had fine foliage from the edge of the pot to the top, which had a *head* of young, "but large," leaves. The plant, in all its stages of growth, has an assemblage of the young leaves, which compose a plumed head, diverging on every side, of carmine, lake, and bright green, in broad or narrow stripes. As the leaves become older, the green turns to a dark olive suffused with brown, and the vivid carmine and lake changes to deep red and purple. It merits a place in every stove, or warm conservatory.

DRACENA NOBILIS.—This, too, is a magnificent erect plant. The leaves are very large, of a rich vermillion, crimson, and purple, striped with green, rendering it highly ornamental.

DRACENA FERREA.—An erect plant, with large leaves, of a dark purple, slightly suffused with brown when young.

HOYA VARIEGATA.—Leaves dark green, with a broad band of yellow next the green, and the margin a creamy white.

HOYA PICTA.—When the leaves are young, they are of a beautiful rose-colour upon a pale yellow ground. When full-grown, they are of a deep yellow, with a very distinct margin of green. It is exceedingly handsome.

CALADIUM HÆMATOSTIGMA.—Leaves large, somewhat in the form of those of the *Calla æthiopica*, but are what is designated arrow-head shaped; green with irregular white marks, each of which has a rosy-crimson blotch in the centre. It is singularly pretty.

CALADIUM PICTURATUM.—Leaves arrow-head shaped, each six inches long and three broad at its widest part; of a bright green, with a handsome rose-coloured broad stripe up the centre of the leaf, and diverges on each side up the lobes, so as to have an arrow-head appearance. It is very handsome.

CALADIUM BICOLOR.—This was formerly called *Arum bicolor*, a well-known stove plant. Leaves medium sized, green, with a large part of its centre suffused with deep red. Pretty.

CALADIUM BICOLOR SPLENDENS.—Leaves of a similar form and size to the last-described; but the centre colouring is more brilliant. Very handsome.

CALADIUM PICTUM.—Leaves seven inches long and five broad, of similar form to the other kinds. When young, they are green, with large irregular-shaped white patches; but afterwards the patches become yellow. It is very handsome.

CALADIUM.—New species from Bornea; the leaves and stalks are almost black, very strikingly distinct.

CALADIUM ATROPURPUREUM.—Leaves (arrow-head shaped too) two feet long and one broad, green, footstalk of each two to three feet long, of a purple colour, the strong ribs at the underside of the leaves are also of a purple colour. A noble and handsome plant.

CONSIGNA BORBONICA.—A very handsome shrub, the leaves being nearly a foot long and two inches broad, of a rich green and yellow colours. The midrib and margin are yellow, and on each side of the midrib are irregular-formed broad patches of green, separated by yellow lines, &c. So beautifully are the markings, that in some leaves the yellow predominates, and in others the green; but all are handsome.

CAMPYLOBOTRYS DISCOLOR.—Leaves oval, four inches long and three inches broad, and of a velvety-green with *bright green* veins. The former-named portion rises high above the hollow bright green veins, and appear as if they had been mechanically embossed. They are very pretty.

CALATHEA ZEBRINA.—This has long been known with us as "*Maranta zebrina*," or "*Zebra-plant*." Its large rich green leaves, regularly striped with velvet, are very handsome.

MARANTA ROSEO-LINEATA.—Its large rich green leaves are very handsomely streaked with a rich rose colour. It is exceedingly pretty.

MARANTA ALBO-LINEATA.—Its large green leaves are beautifully

streaked with white, contrasting well with the last two described plants.

MARANTA VITTATA.—Leaves large, dark green with yellow stripes. Very handsome.

MARANTA PUMILA.—A dwarf-growing plant, leaves green, beautifully striped with white.

MURANTA. NEW SPECIES.—Leaves ten inches long and six broad. The under side of a rich reddish-purple. The upper side bright green with silvery-white stripes. Very handsome.

ECHITES PICTA.—A climbing plant. Leaves five inches long and three-quarters of an inch broad; green, with a silvery-white midrib. Very pretty.

DIOSCOREA DISCOLOR.—The YAM of the West Indies is *Dioscorea alata*. The *D. discolor* has heart-shaped leaves, eight inches long and six broad. The under side is a rich puce colour, and the upper a light green, prettily marked with dark olive-green.

ELÆODENDRON INDICUM.—Leaves a foot long and four inches broad, a pretty light green, with very dark network-like (reticulated) veins. Very handsome. The fruit of this small tree-like plant is much like that of the Olive.

ÆSCHYNANTHUS VARIEGATUM.—Leaves oval-shaped, four inches by two. The under side is of a drab colour, with numerous irregular-formed blotches of a rosy plum-colour. The upper side is of a vivid green, beautifully mottled with irregular blotches of very dark green. Very handsome.

ERANTHEMUM LEUCONERVUM.—Leaves oval, three inches long by two broad, a dark green, with silvery-white, embossed-like midrib and side ribbed veins. Very pretty.

JUSTICIA ZEBRINA.—Leaves oval-shaped, eight inches long by four broad, dark and light green, the former portion of which has an embossed appearance. The veins on young leaves are of a rosy-red, but afterwards changes to white. Very handsome.

MARANTA SANGUINEA.—Leaves eighteen inches long and eight broad, green above, and the under side of a deep blood-colour.

CENTROSOLENA PICTA.—Leaves oval, three inches long by two broad, light green, with a broad dark green margin. Neat and pretty.

PLECTRANTHUS CONCOLOR PICTA.—Many of our readers know the commonly-grown *Plectranthus fruticosus* of the cottage window. The leaves of this new and handsome plant are of similar size. When young, they are yellow, then become light green, and finally a dark green. In the centre of each leaf is a large irregular-formed patch of a ruby-red colour, which has a very striking appearance, especially on the young yellow and light green leaves.

ERIOCNEMA MARMOREA.—The leaves are oval-shaped, about five inches across, of a velvet-green, appearing as if embossed. The midrib, as well as about half an inch of each of the side ribs, are of a beautiful silvery-white. That portion of the ribby veins not white are of a pale green, contrasting prettily with the other colours. It succeeds best under a bell glass, or in a Wardian case, under which the colours are well defined and distinct. It is very handsome.

ASPIDISTA LURIDA VARIEGATA, belonging to the natural order of Acoracea. The leaves are Lily-like, eighteen inches long and six broad, green, with broad and narrow stripes of white.

ERANTHEMUM LEUCONERVUM.—Leaves oval, three to four inches long and three broad, of a dark green, beautifully marked with net-like silvery-white veins, very much in the way of *Achimenes picta*. The plant spreads over the pot, and the shoots hang over the sides. It is very handsome, and merits a place in every stove or warm greenhouse.

DESMODIUM. NEW SPECIES FROM JAVA.—The *D. gyrans* is the moving plant, having narrow willow-like leaves. This new and grand species has green leaves, beautifully marbled with white.

THUNBERGIA DODDSII VARIEGATA.—The leaves are of a bluish-white, with a broad pure white margin. Very pretty.

CROTON VARIEGATUM.—Leaves large, green, with a red midrib and yellow veins and spots. Very pretty.

CROTON PICTUM.—Leaves large, green, with golden-yellow midrib and veins. Very pretty.

HÆMODICTYON PICTUM (or venosum).—Leaves oval-shaped, upper side vivid green, marbled with velvet-green, and the numerous net-like veins are of a pale red, having a most beautiful appearance. The underside is a handsome purple colour. Exceedingly pretty.

ANÆCTOCHILUS LOBBII.—Leaves a vivid green, with white veins, forming a beautiful network-like appearance. All the *Anæctochilus* have leaves of thick substance.

ANÆCTOCHILUS PICTA.—Leaves green, with veined network-like veins of red, yellow, and rose, with two green spots in the middle. Beautiful.

ANÆCTOCHILUS LOWII.—Leaves bright green, with white network-like veins. Very pretty.

ANÆCTOCHILUS SETACEUS.—Leaves deep green, with golden network-like veins. Very pretty.

ANÆCTOCHILUS INTERMEDIA.—Leaves velvet-green, with bright green, with golden and reddish network-like veins. Very pretty.

ANÆCTOCHILUS ARGENTEUS.—Leaves light green, with silvery netlike veins. Very neat.

ANÆCTOCHILUS CORDATUS.—Leaves dark green, with golden and red netlike veins. Very beautiful.

ANÆCTOCHILUS GOODYA.—Leaves a vivid green, with silvery network-like veins. Very beautiful. An article on the cultivation of the *Anæctochilus*, by Mr. Burley, was given in our October Number. The plants are peculiarly interesting and beautiful.

ACHIMENES PICTA.—Leaves large, green, with silvery veins. Very beautiful.

ACHIMENES ARGYROSTIGMA.—Leaves medium-sized, green, with silvery dots. Pretty.

BEGONIA ARGYROSTIGMA.—Leaves large, green, with numerous silvery dots. Pretty.

BEGONIA ZEBRINA.—Leaves ear-shaped, eight inches long and four broad, in shades of light green, and very dark greenish-purple. Pretty.

GESNERA ZEBRINA.—Large leaves, bright green, marbled with velvety-green. Pretty.

HYDRANGÆA JAPONICA.—Leaves similar in form to the well-known *Hydrangæa hortensis*, rich green at the centre of the leaf, and the entire beyond is pure white. It is exceedingly handsome, and deserves to be in every greenhouse and sitting-room. It is thought to be hardy enough for out doors in warm and dry situations.

DICHORISANDRA. NEW SPECIES.—Leaves six inches long and two broad, deep green, with two red stripes the entire length of the leaf, similar to a ribbon. Very pretty.

TRADESCANTIA ZEBRINA.—A trailing plant, the shoots hanging over the pot side. The leaves are bright green, striped with a very dark colour; the under side of the leaves a beautiful puce-purple. Very pretty.

PHYLLATHRON BOGERIANUM.—A small tree-like plant. Each leaf is ten inches long and two broad, bright green about midway of the leaf; it is divided as if cut clean by a knife close up to the midrib on both sides, and it has the appearance of two leaves. The stems, branches, and leaves are marked irregularly with white, as if white paint had been scattered upon it. Neat and very singular.

DURANTA BONNARI.—A shrubby plant, the leaves of which are somewhat like our *Althæa frutex*, light green in the middle, and the other part white. It appears to be a neat growing plant, and very pretty.

NEOTTIA PICTA.—Belongs to the orchideous tribe of plants. It is a dwarf-grower, almost in the way of the Lily of the Valley; each leaf is eight inches long by two broad, of a silvery green, striped, and spotted with a very dark colour. Pretty.

GRAPTOPHYLLUM HORTENSE.—A small tree-like plant. The leaves are almost like those of a common bay-tree in form and size, but they have the substance of a Camellia leaf, of a rich green, with an irregular-formed yellow patch upon it; but this marking does not extend to the edge of the leaf. It is by some termed the “face plant,” in consequence of parts of the side features of the face being shown in parts of the yellow outline.

TILLANDSIA ACAULIS VIRIDIS.—The plants of this genus are very like small Pine-apple plants of a dwarf growth. This species has pea-green leaves, with silvery stripes or bands crossways of the leaves.

TILLANDSIA ACAULIS ZEBRINA.—The leaves have a chocolate ground, with silvery cross bands.

TILLANDSIA ACAULIS.—A darkish green ground, with silvery cross bands. Each kind is pretty and very interesting.

CORONILLA GLAUCA VARIEGATA. The foliage is of pretty pinnate leaves. The centre of each leaflet is green, surrounded with a broad pale yellow margin. It is very pretty.

POMPONE (or *Minima*), CHRYSANTHEMUMS.

BY MR. JOHN BURLEY, OF WELLINGTON-ROAD NURSERY, ST. JOHN'S WOOD, LONDON.

OWING to the very great improvements that have been effected within a short period, and that occur with each following season in this most charming section of autumnal flowers, I am induced to forward for insertion in your Magazine a descriptive list of some of the best and choicest varieties which have been sent out up to the present time; also a few of the principal particulars relative to a successful management of the plants. If you deem them worth insertion, I feel assured the detailed remarks and list of varieties will assist those readers who are desirous to grow and bloom them satisfactorily, as well as be of use in making a good selection from those new varieties which they have not seen in bloom.

Each successive spring there are numerous new hybrid productions in certain classes of plants; and in none has there been such a striking improvement in so short a period as has been accomplished in this section of Chrysanthemums. With it, as is the case with other classes of hybrids, there are some new varieties sent out that do not meet general approval, though such were most probably thought well of by the raisers. To prevent such unnecessary expense, and any vexation through disappointment arising from having obtained an inferior flower, I shall here give a list of what are, in our own country, admitted to be of first-rate merit.

The general particulars of management are the following:

In the beginning of March select strong suckers from the old plants, and pot them singly in small sixty-sized pots, in a light *rich* soil, place them in a frame or pit, and keep for a fortnight or three weeks rather close and shaded, in order to promote an immediate striking of fresh roots into the soil; then gradually harden them off to bear the open air. As the pots get filled with roots, repot the plants from time to time in larger ones. Let the leads be stopped, in order to promote the pushing of side-shoots, and have bushy stiff plants. This attention to stopping must not be done after the first week in July, for shoots made much after that time will be too late to produce a satisfactory bloom, if ever any flowers at all. If there be more side-shoots push than is required, just to have the plants *bushy*, and at the same time open, not crowded, thin them, cutting clean away all the unnecessary ones. By a little careful attention to stopping the leads and thinning the shoots, well formed dwarf bushy plants are produced, and when in bloom their appearance is far preferable to the tall grown unsightly ones; more particularly so with this charming section of Chrysanthemums, their small, Ranunculus, and Anemone-like, beautiful flowers, are in harmony only with dwarf bushy plants. Such are as readily produced as the tall lanky ones, only taking care to stop the leads at the proper time.

When planted out-doors, if frost set in whilst they are in their beauty, they may be taken up, potted, and removed to the greenhouse, where they will bloom without having been injured by removal, if but a liberal supply of water be given to the roots.

The beauty of the Pompone, or Lilliputian Chrysanthemums, is not merely in their peculiar neatness of form, in the blossoms, or loveliness of colours, but in the *profusion* of flowers, and the early period of their blooming. They are generally in bloom three or four weeks earlier than the *large flowered* section are, thus obviating the complaint made against the latter class relative to the blossoms being damaged by casualties at a later period, as by frost, excess of wet, powerful winds, &c. The Pompones being so much earlier, are in their beauty previously to the usual severities of the autumn season.

The following are the best varieties, all of which are entitled to a place in every collection of these pretty flowers :

BIJOU DE L'HORTICULTURE.—Flower white, with a straw-coloured centre. Excellent form, well up in the centre. One of the best.

DRINE DRINE.—Fine yellow. Form excellent, being much like those of Exquisite. It is decidedly the best of its class, as it possesses the good qualities of a dwarf habit, and a profuse bloomer.

MADAME HECTOR JACQUIN.—Pure white, and the petals have a beautiful feather-like appearance. Flower large for its class, and very striking.

PRINCESS MATHILDE.—Beautiful pearl-white. Dwarf habit, and profuse bloomer.

MADAME ROUSSELOIN.—Beautiful rose-colour, and of superb form, being quite a globe when fully open. Of dwarf habit.

COLOMBINE.—Cinnamon striped with yellow. It is quite a novelty, producing a charming appearance. It is a profuse bloomer, and ought to be in every collection.

LA VAPEUR.—Creamy-white, shaded with light yellow, very pretty.

ARAMIS.—Beautiful deep rose-colour, and forms quite a globe. An excellent variety.

CEDO NULLI.—Pure white, of excellent form, and of the largest size in Pompones. It has an anemone centre. Should be in every collection.

ATALA.—White, tipped with pink ; well up in the centre, and very handsome.

GRAND SULTAN.—Deep rose-colour, with a white tip, forming quite a ball. A profuse bloomer, and very beautiful.

MADAME JULES D'EVRY.—Delicate light rose, with a yellow centre. Very pretty.

LA ROUSSE.—Deep orange-colour, small flower, but of excellent form.

GRAZIELLA.—Beautiful light rose, excellent form, well up in the centre, a profuse bloomer, and ought to be in every collection.

HENDERSONII.—A good orange-yellow ; dwarf habit, and is a profuse and very early bloomer.

In addition to the above new varieties of this year's sending out, the following of last year are very attractive and superb varieties. I merely give the names, the descriptions may be found in any nursery catalogue of flowers :

Adonis, Asmodee, Calibree, Argentine, Autumnna, Tenella, Anais, La Gitana, Modele, Sacramento, Surprise, Solfaterre.

Superb varieties of the large-flowered class, viz., *Chevalier Dumege*,

fine yellow, a very large and superb flower. *Alebaide*.—Orange-yellow, of exquisite form.

Old Superb Varieties.—Annie Salter, Cloth of Gold, Pilot, Lady Talfourd, Mount Ætna, Peruvienne, The Warden, Queen of England, Jenny Lind, Madame Laborde, Pio Nino, Voltigeur.

REVIEW.

A Garland of the Months. By Mrs. Milner. 12mo, pp. 242. Binns and Goodwin, Bath.

THIS neat little garland has been woven with great taste and judgment, and will, we feel assured, be perused with pleasure by every lover of Nature in "the garden, the grove, and the field." The talented authoress has succeeded in producing a very interesting book, containing a great variety of information concerning animated and vegetable nature, as displayed throughout the year; the whole written in a delightful style. We need but say we heartily recommend it. The following selections will show Mrs. Milner's style.

"Of flowers, not many venture to put forth their blossoms during the severe cold of January. We seem to hear

* * * 'through the leafless trees,
A dirge-like moan in the passing breeze;
Sighs breaking in on nights' silence deep,
From Nature's breast, while her children sleep.
She mourns that the rose's scent is fled,
She weeps that the lily fair is dead:
For the waving corn in the golden fields,
For the purple clustre the rich vine yields.'

"Some few field plants, however, may now be seen in bloom; and in the garden, even in January, if the weather be mild, the snow-drop (*Galanthus nivalis*); the yellow crocus (*Crocus aureus*); the garden anemone (*Anemone hortensis*), and some other flowers, sometimes in the south of England, or in warm situations, 'broider the ground:' the snow-drop in particular.

"The first pale blossom of th' unripened year,' has ever been an especial favourite with poets and florists. Though we have mentioned it as blooming, under favourable circumstances, in January, it was formerly called 'The Fair Maid of February;' and, though now to be met with in every cottage garden, Evelyn speaks of it as being in his time, rare; and calls it 'The Snow Flower.' Its botanical name, *Galanthus*, is derived from two Greek words, signifying milk and a flower. The snow-drop, with its exquisite grace of form, and its surpassing delicacy of colour, is popularly and naturally regarded as an emblem of purity. It may also be viewed as a symbol of the resurrection; rising, as it does, from amidst the death of winter.

"Seeing, lately, two opening snowdrops, the one at the head, the other at the foot of a grave on which the snow lay like a heap of white drapery, I was reminded of the two angels that the weeping Mary Magdalene saw, where the body of Jesus had lain. The heap of drifted snow brought to my view 'the linen clothes lying;' and the spotless flowers spoke to my mourning soul the words of the angels in shining

garments, 'Why seek ye the living among the dead? He is not here, but is risen as he said.'—p. 5.

"The hum of the honey-bee is peculiarly agreeable; perhaps, as suggesting the idea of cheerful and useful labour. When the busy worker alights upon a flower, her hum ceases, but is resumed again as she flies off with her booty. The most sonorous insect-hum belongs, perhaps, to the large humble-bee, whose booming, audible at a considerable distance, becomes sharp and shrill as the insect approaches the listener's ear. Even the trumpet of the gnat, although suggestive of a poignant sting, is pleasant when heard in an insect-chorus at noon or eventide, when the joyous creatures, glittering in the summer air, meet together for merry pastime. Whole troops, however, of stingless insects may be observed, especially towards sunset, during the month of August. These ephemeræ, distinguished by their spotted wings, assemble in multitudes for their evening gambols, often near streams or ponds; or in the neighbourhood of hedges and low trees. Now, they rapidly beat the air with their wings, till they attain to an elevation of four or five feet, and then descend again with their wings motionless and expanded. Like other creatures of God, these tiny insects are curiously made, and their organization is admirably adapted to the restless lives they are designed to lead. If you look carefully at them as they float up and down, you will observe that they uniformly elevate their three long tails, and that the two lateral ones are so separated as to form nearly a right angle with the central one. These tails seem given to them to balance their little bodies when they descend in a horizontal position. So agile are their movements, and so wonderful their instinct, that, should a heavy shower suddenly fall, they are enabled to steer unharmed between drops larger than their bodies, and which, if come in contact with, would dash them to the ground.

"Some of these ephemeræ often exhibit a brilliant appearance. Seen in the shade, they seem like a cloud of 'dark shadowy atoms,' alternately rising and falling in shapes the most fantastic; but when viewed in the bright sunshine, the spectator might almost fancy that its beams were showering down myriads of glorious creatures, 'that in the colours of the rainbow live.' Some look like little dancing pearls; others appear to be clad in bright armour. Some glitter in green and gold; others reflect other prismatic hues; and others again sparkle like emeralds or diamonds.

"These and other bright and beautiful insects, which make their first appearance in March or April, and continue to people the air so long as the beams of the sun have sufficient power to cherish and invigorate them, are peculiarly numerous during the month of August"—p. 134.

MISCELLANEOUS SECTION.

HEATING A GREENHOUSE WITH GAS.—Dr. Lindley's caution, in last Number, is appropriate in reference to the use of gas, as detailed. We have seen it used instead of coal or coke, in the hot-water pipe system of heating a greenhouse eight yards

long, and it answered every expectation. The small boiler, "an ornamental one," was placed at a front corner, and the flow and return pipes (three inches bore) extended along the front. The gas was lighted in the fire-place, out of sight from any person in the house, and the water in the boiler was soon sufficiently heated, and the house a nice temperature. The gas was turned on towards evening, and allowed to burn till bed-time. It might, however, have been kept burning, with perfect safety, all night, if requisite. There is, of course, a fume from the gas as it burns, and a pipe was extended from the fire-place outside the back wall of the house, and through this chimney the fume escaped. The cost of construction was but a few pounds, and the expense of the gas from 4*d.* to 6*d.* per day, even when used several hours. The gas was brought from the adjoining street supply-pipe. It is not necessary the stove should be in the greenhouse; where there is convenience outside, it would be best to have it there, and the pipes enter the house through the wall, as usual in the hot-water pipe system. Where gas can be had for the purpose we have stated, nothing can be better or cheaper for a greenhouse, pits, &c. There is no trouble in fire-lighting, of coals, coke, &c., and its heat is at immediate command.—CONDUCTOR.

CULTURE OF THE POLYANTHUS.—In our last we gave an extract from the "Midland Florist," the following is a continuation. "After planting, the surface of the bed is stirred an inch deep, except close to the plants, as there the soil must be pressed very compact, and more soil added for the purpose. This being done, moss, well dried before a hot fire, is closely packed all round the plants, so as to keep the leaves upright through winter. A piece of glass is fixed on four supports over each plant, to prevent water getting into the heart." On growing Polyanthus in pots, the Author remarks: "Having grown them for nearly thirty years, I find the best time for propagation is the last week in July and first in August; and for potting the general stock of plants, the last fortnight of September. At this time," he observes, "each heart will be found to have formed for itself a new joint, or base, from which fresh fibres are produced, and the main root usually fibreless and approaching decay." He cuts away the old main root, and the new roots are depended upon for growth. Before potting, he prefers to grow them a few weeks in the open bed, and then be removed into pots. He uses *fresh* fibrous loam, cut about three weeks before using, having it well broken and exposed to the sun; and to it is added a quantity of charred vegetable matter, or wood ashes, well rubbed together. He also uses decayed cow manure, mixed with one-eighth of charred vegetable matter, and one-eighth of shingle, or grit sand. The plants are put into a frame in November, for winter preservation. The following are twelve of the best varieties:

Hufton's Lord Lincoln.
 „ Traveller.
 „ Earl Grey.
 Addiss's Kingfisher.
 Oliver's Cheshire Favourite.
 Barrenger's Prince of Wales.

Buck's George IV.
 Bullock's Lancer.
 Crownshaw's Exile.
 Pearson's Alexander.
 Brown's Freebloomer.
 Nicholson's King.



THE Chrysanthemum is the most valuable plant we have for autumn decoration, either for the greenhouse or the flower-garden; it fills up a blank that no other plant we have could do. It supplies a profusion of beauty of almost every colour. It has become a desideratum in all well-managed flower-gardens, having the facility to plant a proper proportion of the most showy kinds, which ornament them, when the season keeps open, up to December. This autumn the rains have injured them. In order to have the flower-garden lively as possible, the succession to Chrysanthemums must be made up with evergreen shrubs; it is readily done at a trifling cost by plunging in potted plants of Laurustinus, Aucuba, myrtle-leaved, broad-leaved, and variegated Box; gold and silver-striped, green-leaved, yellow and crimson-berried Hollies; Arbutus, Rhododendron, Mahonia aquifolia, Phillyrea, Arbor vitæ, Bay, Kalmia latifolia, dwarf Laurels, Daphne pontica, Cedars, Cotoneasters, &c. A garden thus furnished produces a very cheering appearance; and those who have not seen one so ornamented cannot adequately conceive of its beauty and finished neatness. This attention most amply repays for the small expense, producing a lively appearance, instead of having bare beds for several months. If any Tulip-bulbs be still out of ground, plant them as early as possible.

There are a number of very handsome single and double varieties of Anemones, which are highly ornamental to a flower-garden, whether in patches in the beds, or as an edging. To bloom well next season they must be planted immediately.

The *Gentiana acaulis* is a most charming spring flower, suited admirably for edging or patches. Its intense blue flowers, in contrast with Anemones, Hepaticas, and similar early-blooming plants, is very striking. Attention will be necessary to protect the tender kinds of herbaceous by a layer of dry leaves, pots, boughs, or branches of evergreens, &c., also the stems of tender climbing and other Roses, by tying a covering of furze over them, that, whilst it fully protects, admits sufficiency of air for the well-being of the plant.

Auriculas and Polyanthus require plenty of air in fine weather, and but little water. The like attention will be required to Carnations, Pinks, &c., kept in pots. Dahlia roots should be looked over, to see if any are moulding or likely to damage. Let the roots be dry before they are laid in heaps. Newly-planted shrubs should be secured to stakes, so that they are not loosened by the wind. Where it is desirable, reduce patches of border flowers to a suitable size. Ten-week Stocks and Mignonette, in pots for blooming early next spring, to adorn

a room or greenhouse, must not be over-watered, and be kept from frost. A cool frame, well secured by soil or ashes at the sides, and plenty of mats or reeds to cover at night, will answer well. During hard frosts, if additional soil be required for flower-beds upon grass lawns, advantage should be taken to have it conveyed at the time, so that the turf may not be injured by wheeling. Pits or beds for forcing Roses, &c., should be prepared early in the month. Tan or leaves are most suitable, unless there be the advantage of hot water or steam. New-planted shrubs of tender kinds should have their roots protected by laying some mulch. Suckers of Roses, &c., should now be taken off and re-planted for making bushes, or put in nursery rows. Soils for compost should now be obtained. Beds of Hyacinths, Tulips, &c., should have occasional protection. Any roots not planted may successfully be done, in dry mild weather, till February. Sweet Violets: plant these little gems as much as possible along the sides of walks, near seats, rooms, banks, under trees, &c.; they are so highly fragrant as always to be acceptable, and more especially being early spring flowers. Encourage all the spring ornaments as much as possible: Crocuses are pretty flowers, always gay in sunshine, and give a peculiar cheerfulness to every place they occupy; never be sparing in quantity of them near a dwelling-house. Do not omit the first flower that awakes thee from the repose of winter,

“ A flower that first in this sweet garden smiled,
To virgins sacred, and the SNOWDROP styled.”

IN THE FORCING STOVE.

Aconites, Crocuses, Violets, Mignonette, Stocks, Tulips, Cyclamens, Narcissus, Lilies of the Valley, Hepaticas, Primroses, China Primroses, Persian Irises, Cupheas, Hyacinths, Pinks, Carnations, Tree Carnations, Heliotropes, Scarlet Geraniums, Salvias, Gardenias, Roses, Azaleas, Cinerarias, Jasmines, Honeysuckles, Deutzias, Rhododendrons, Persian Lilacs, Rhodoras, Ribes, Mezereums, Correas, &c., required to bloom from January, should be brought in early in the present month. The plants should be placed at first in the coolest part of the house; never allow them to want water. Pots or boxes containing bulbous-rooted flowering plants, as Hyacinths, Narcissus, Persian Irises, Crocuses, &c., should occasionally be introduced, so as to have a succession of bloom. Many persons who take a delight in growing Hyacinths or other bulbous plants, for adorning a room or window, in winter or early in spring, have been frequently disappointed by the abortiveness of some and weakness of others. This principally arises from the inability of the plant to develop itself with a rapidity equal to the quantity of moisture it imbibes, on account of its upper surface being acted upon too immediately by the atmosphere; hence arises the necessity of covering the bulb. That such is a fact is evidenced by the admirable and certain success of nearly every bulb, especially Hyacinths, that is covered with about six inches of old spent bark or ashes. This or some similar light material should always be used. Even bulbs intended to bloom in glasses we prefer starting in the cold bark, and then transferring them to the glasses when the roots are about two

inches long. Where such covering is not adopted, the pots or glasses should be kept in a dark place till the roots are two or three inches long, and then bring them to the light. Always use water for the glasses that is just aired; cold water gives a check which greatly injures the roots, and, consequently, the bloom. Cactus plants that have been kept out of doors, or in the greenhouse, should occasionally be brought into the stove for flowering, which gives a succession. If any of the forced plants be attacked with the green fly, a syringe with diluted tobacco-water will destroy them. If the leaves appear bit, and turn brown (the effect of damage by red spider), a syringe of soapsuds at the under side of the leaves is effectual to destroy them. The glutinous substance remaining, not only kills those it is applied to, but prevents others returning there. The old *Eranthemum pulchellum*, with its fine blue flowers, *Justicia speciosa*, *Gesneriæ zebrina*, *Justicia pulcherrima*, *Aphelandria cristata*, *Poinsettia pulcherima*, *Cestrum aurantiacum*, and *Begonia fuchsioides*, are fine winter ornamental blooming plants.

IN THE GREENHOUSE.

As much fire as will barely keep out frost will only be necessary, and for the purpose of drying up damp arising from foggy nights, or from watering, all possible air should be admitted in the day-time; but mind to keep the plants from damage by frost.

Fuchsias and greenhouse plants, intended to be inured to the open air, will require to have protection at the roots, and probably, for the first winter, over the tops too, by furze branches, canvas, wicker baskets, mats, &c. If greenhouse plants require watering or syringing over the tops, let it be done on the morning of a clear day, when air can be admitted; and towards evening a gentle fire-heat should be given. *Calceolarias* must be in a cool situation. Whilst in a cool and moist atmosphere, the shoots will often push at the underside numerous root-lets; where such are produced, they should be taken off and potted. *Pelargonium* plants for exhibition should be re-potted by the middle of this month; according to the size of the plants must be the pots: The smallest-sized pots in which plants are to be when shown are the 24's, eight inches in diameter, and the largest-sized are eleven inches in diameter. The plants need not be potted into these sizes now, but a size less, and in February be re-potted into their final pots. The plants must not be crowded together, but be kept apart. *Cinerarias* are often attacked at this season by the green fly; let the plants be placed in a hot-bed frame, and be fumigated with tobacco-smoke at the first appearance of the insects.

BRIEF REMARKS.

The following were the only seedlings which obtained first-class certificates at the National Carnation and Picotee Meeting at Norwich, July 28th, 1852, and is extracted from the *Gardeners' Chronicle*:

PICOTEES.

HAIDEE (Fellowcs').—A flower which has hitherto been shown as *Fellowcs' No. 51*; a light purple, of remarkable bold and clean petals, not over full; edges as smooth as most varieties, although not yet perfection in that respect, and the colour well laid on.

BRIDESMAID (Matthews) was similarly rewarded; it is of the same class, light purple, and in every respect on an equality with the foregoing, with *perhaps* the improvement of a smoother edge; for symmetry it would be difficult to surpass these varieties.

LADY MACBETH (May).—A heavy red; and when we assert it to be an *improvement* on Mrs. Norman, all will feel sure that its merits must be great; *except a better tone of white*, we know not what more can be desired.

NOTE.—Mrs. Norman is a heavy red Picotee, colour bright, and evenly laid on; petals well-shaped and fleshy; the form not to be surpassed, and the white good. But here is one surpassing Mrs. Norman. We would wish to know in what respect. Admitting Lady Macbeth to be of good form, petals well-shaped, fleshy, and very clean, what more can it have to excel Mrs. Norman? If it is of a more scarlet colour, it will only have this advantage over Mrs. Norman, and it has a very great drawback, *wants a better tone of white*, or, in other words, *the white*, which is one of the essentials of a Picotee, *might be improved*. Mrs. Norman does not seem at all times to stretch well in the North.—EDITOR.

MISS PUXLEY (Turner) is of the rose-coloured class, and, although *far from perfection*, it is an addition to a class at present select. *Not in quality, but as respects quantity, as this class wants improving*.—EDITOR.

LADY PAGE WOOD (Costar) is a full flower, with medium purple edge, and although not *considered first-class*, it may be grown to advantage. *Query*.—Can second-rate flowers beat first-rate ones? Suppose a pan of twelve was staged, cannot twelve first-class flowers be found after so many new first-class flowers have been added during the last few years? Can Lady Page Wood beat Cristabel, Giulio Romano, Alfred, Mrs. Norman, Duke of Rutland, Ganymede, Ophelia, Prince Arthur, Grace Darling (Marris), Prince of Wales, Jeannette, Lord Nelson, Mrs. Barnard, and others, catalogued as being fine, and which have obtained a number of first-class certificates; if not, how can a second-rate be grown with advantage by an exhibitor?—EDITOR of *Floricultural Review*.

PLAN OF FLOWER-GARDEN.—A constant subscriber from the commencement of the *Floricultural Cabinet* would feel grateful for any assistance the Editor or his Correspondents could afford her in remodelling a flower-garden. The ground is a grass circle, measuring eighty feet in diameter, in front of an old-fashioned, ugly, red brick house, surrounded on three sides by a hedge of evergreens, chiefly rhododendrons, shutting out a lane in front, the road to the house on one side, and the stable-yard, from which a paling divides it, on the other. The object of the constant subscriber is to keep as constant a succession of gay ornamental flowers during the year from the windows as possible. The aspect of the house is south, and the circular garden is rather more sheltered by tall trees than is quite desirable, though none hang over it. Any hint would be thankfully received, as the time for such operations seems passing.—*Bromley, October 13*.

TREE PEONIES (MOUTAN).—The brief descriptions given below are from notes taken in Messrs. Standish and Noble's nursery, when the plants were in flower. As yet they have received no name. True, the Chinese names accompanied them, but, of course, it would be of little service to retain their nomenclature for every-day use in English gardens. We perceive, by a recent catalogue of the nurserymen above named, that they hope, in the ensuing season, to publish full descriptions of all of them, with names by which they may be known and inquired for. They are certainly noble-looking plants when in flower, and whether, as regards the individual size of the blossoms, or the variety and richness of colour, greatly exceed any hardy plants hitherto known in English gardens. We give numbers to the descriptions, corresponding with those attached to the plants in the nursery-beds to which they refer:

1. Not very double; rich purple.
2. Semi-double; deep red, black base to the petals.
4. Anemone-flowered; white; beautiful compact flower.
5. Fine double rose; compact and good.
6. Semi-double; white, base of the petals stained with purple.
7. Pale lilac; very fine.
8. Double; rosy lilac, shaded; very fine.
9. Deep rich purple; a splendid flower.
10. Semi-double; bright red.
11. Semi-double; French white, base of the petals stained with purple.
12. Clean, rich, light purple; fine.
13. Semi-double; Tuscan rose colour.
14. Very double; salmon pink, shaded off to French white; a magnificent flower.

15. Double; primrose colour; very fine.
16. Semi-double; bright red, almost scarlet; very beautiful.
17. Resembles the last, but the flower is larger.
18. Double rose, shading off to lilac; fine.
19. Semi-double; clear white; beautifully shaped; base of the petals slightly stained with red.
20. Semi-double; clear white; larger than the last, and with a deep purple stain at the base of the petals.
21. Very fine white.
22. Fine double rose.
23. Rosy lilac, shaded; fine.
24. Double purple; very large.
25. Double; very large; deep red; shape like a camellia.
26. Globosa—the largest, and most beautiful white.
27. Semi-double; dark lilac; base of the petals darker.
28. Double; beautiful clear white; Marattah-shaped; very sweet scented.
29. Scarlet; very large, distinct, and beautiful.
30. Peach colour, shaded; large, and very handsome.

From these brief descriptions it will be seen how various are these Moutans in the colour and character of their flowers. Even in their young state they were very fine, and gave promise then, when the plants became older, to be even much larger. Their foliage, too, is very fine and deep-coloured, forming an excellent background to the glaring tints of the blossoms.—*Gardeners' Journal*.

CONCRETE SURFACE WALKS.—I observe a correspondent, who has some walks thus constructed, states that they are objectionable in consequence of being hard; the surface does not yield in the least to the tread, and the rough pebbles make it painful to the feet. Now these defects are easily obviated. I had a considerable extent of walks formed in 1851 as follows, which have realised my utmost wishes. The soil was thrown out, and the surface of the substratum was scooped out, so that there was a steepish slope from the sides to the middle, so that the water could rapidly run from the side to the centre, where I had a good covered drain, and the space filled up two-thirds of its depth with rough broken stones, brickbats, clinkers, &c. Upon these a layer of small broken stones and rough gravel was laid, and the surface rolled quite even and firm. I must remark, however, the surface was formed so that the centre of a five-feet walk was five inches higher than the sides, which gave a sufficient inclination for rain to pass off quickly to the sides. Over this bed of gravel, stone, &c., I had a thick coating of gas tar evenly spread over by means of an even-edged board, upon which was regularly sprinkled fine gravel, none of its parts being larger than the seed of the flower-garden sweet-pea. The sandy part had been properly sifted from it. When it had been made somewhat even, a sprinkling of yellowish sand was given over the entire, and then it was evenly and firmly rolled with a metal roller. It is now two years since I had the walks constructed, and they remain as firm even, and retain the colour of the sand, as they did the first day of completion. There has not been one weed or any moss, &c., upon them, and I am persuaded will not be; and all they will require for very many years, I think, will be a slight sprinkling of the sand. The surface remains quite even, and though firm, it does not feel hard to the tread, and there is nothing with such a fine gravelled surface to affect the feet of any one. Where the ground is level, I have no occasion for any drain to carry away the water. In other places I had the surface of the substratum formed so that it inclined steeply from each side to the middle, and along the middle a good drain was formed to carry away the water. A few drains are formed from the side to the centre drain, so that the side accumulation of water is thus taken away. Although the gas-tar, and gravel would form an even surface without almost any stony substratum, still it would be liable to become too damp below, and the surface not endure so long a period as when there is a dry substratum.—*J. Beaton*.

LIQUEFIED MANURE.—In fact, I see clearly that the liquified manure will enable me to produce my root crops at 5s. per ton, and will very largely increase my other productions. We frequently make the drains run at five feet deep with our liquid manures. The liquor is coloured, but has only an earthy smell after filtration. One load of bullock or cow-dung liquified will manure more land than four loads dry; it acts immediately, and gives a quick return. I have not the least doubt, that within fifty years our rivers and brooks will be used for irrigation and for drainage.—*J. J. Mechi, Tiptree Hall, Kelwodon, Essex*. [Its application to flower-beds, rose-gardens, &c., would be equally successful in promoting an increased vigour of growth, &c.]—*Editor*.

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LAERTES, fine rich yellow ground, margined with maroon, large, and fine quality, 5s.

VIRGO, white self, occasionally edged with light blue, 5s.

HERCULES (Treacher), rich mulberry self, of fine form and texture, of immense size; first in class showing at the Hammersmith Pansy Society, May 7th. 5s.

TIMOUR (Bragg), yellow ground, margined with bronze purple, large fine substance and quality, 5s.

AMELIA (Bragg), cream, edged with light blue, quite distinct, 2s. 6d.

SEEDLING HOLLYHOCKS.

KING OF ROSES (Bragg), named by G. Glenny, Esq., 1850: first Class Certificate, London Floricultural, August 12th, 1851; first ditto at Extra Show, Surrey Gardens, August 13th; first ditto ditto September 3rd; first ditto, National Floricultural, September 4th. 7s. 6d. (no discount.)

LILACINA (Bragg): first Class Certificate, London Floricultural Society, August 12th. 5s.

SATISFACTION (Bragg), fine deep rose: first Class Certificate at Surrey Gardens, September 3rd. 5s. (no discount.)

W. B. also begs to call attention to his collection of **PINKS**, **CARNATIONS**, and **PICOTEES**, the stock of which is particularly fine and healthy, and has a few pairs left of those fine Pinks he is now sending out for the first time, viz.: **LADY FRANKLIN** (Hall), and **SIR R. PEEL** (Hall), which have both taken first Class Certificates, 5s. per pair.

Also to those superb Seedling **GERANIUMS** he is now sending out, viz.:

JULLIEN (Bragg), a very large bold flower of good shape and substance, ground colour deep rose, dark maroon blotch in upper petals, pure white centre, good trusser, quite distinct from anything out, 21s.

CLAUDIANA (Bragg), a very smooth good shaped flower, upper petals bright salmon, with dark crimson blotch; under petals, bright rose, distinct white centre, good habit, 21s.

LORD GOUGH (Bragg), a very useful bright purple flower, very profuse bloomer, good shape and good habit, new, 21s.

W. B. has also an extensive variety of Seedling Hollyhocks, nearly equal to named flowers, at from 2l. 10s. to 5l. per 100; fine seed, 2s. 6d. per packet.

Pot and ground roots of all the new and old fancy, and other Dahlias at moderate prices. Every attention will be paid to packing. Carriage paid to London, and plants given to compensate for long distances.

MAHER'S EARLY PROLIFIC KIDNEY POTATO, the best cropping early Potato grown, 4s. per peck, 10s. per bushel, bag included.

Post Office Orders to be made payable to **WILLIAM BRAGG**, Slough, Bucks.

January 19, 1852.

BARKER'S NEW VERBENAS AND SCARLET GERANIUMS FOR 1852.

CHARLES BARKER,

FLORIST,

GODALMING, SURREY,

Begs to offer the following superb SEEDLING VERBENAS and SCARLET GERANIUMS, in which he has every confidence, and trusts that the high character which the seedlings he has hitherto sent out have maintained, will be a sufficient guarantee that the kind now offered are in all respects of first rate quality, they have each received *prizes* and first class *certificates*, they have also been submitted to the most competent *judges* of the day for opinion, and have been by each pronounced of first rate excellence.

VERBENAS.

QUEEN OF THE BEAUTIES, French white, shaded lilac, centre rich purple lake, truss very large and finely formed, habit good, beautifully sweet scented, a magnificent variety, perfectly wax-like, and distinct from any other out, 5s.

DON JUAN, violet purple with crimson centre, good form, clean and rich colours, a fine truss, and very distinct, 5s.

PARAGON, bluish lavender suffused with brilliant rose, centre fiery crimson, eye dark grey, truss large, habit fine, 5s.

FAIR ROSAMOND, very clear and a beautiful delicate flesh colour, with a bright rose spot in the centre, and small white eye, a large and fine variety, 5s.

NEW SCARLET GERANIUMS.

MOUNTAIN OF FIRE, brilliant orange scarlet, truss exceedingly large, flowers nearly a perfect circle and smooth on the edge, a truly magnificent flower, 5s.

CARDINAL, rich vivid scarlet, flowers large, truss fine, a very brilliant and beautiful variety, 5s.

MAGNIFICENT, rich glowing vermillion flowers, large and circular truss, extremely large and globular, abundant bloomer, a superb variety, 5s.

MAGIC CIRCLE, 3s.

MOUNT ETNA, 3s.

THE ROSE OF CASHMERE, 3s.

PETUNIAS.

COMMANDER-IN-CHIEF, rich rosy purple, exceedingly large (many flowers produced last season measured six inches in diameter,) throat very dark, richly veined with dark puce, abundant bloomer, habit dwarf and compact, 3s. 6d.

No discount unless three Plants are taken.

Strong Plants fourth week in April.

AN ABRIDGED CATALOGUE
OF
FLOWER-SEEDS, &c.,

CONTAINING A LIST OF ASSORTMENTS OF
GERMAN IMPORTED SEEDS, &c. &c.,

OFFERED FOR SALE BY

HARRISON & CO.,
NURSERY AND SEEDSMEN,
RICHMOND, NEAR LONDON.

Messrs. HARRISON and Co. have the honour to submit to their patrons the following abridged list of Flower Seeds. Having during the past year received so many flattering testimonies of the quality of their Seeds, they feel assured of their being further honoured with commands, which shall receive their prompt attention. H. and Co. have imported the German Seeds from the same Foreign House as of former years.

Messrs. Harrison and Co., although not having appended a list of Vegetable Seeds, beg to observe that they possess a large collection of all the most approved varieties in cultivation, which they supply at very moderate prices.

GERMAN FLOWER SEEDS.

IN THE ORIGINAL SEALED FULL-SIZED PACKETS.

			s.	d.
1	Twenty finest selected varieties of Summer Stocks	.	5	6
2	Ten ditto ditto	.	3	0
3	Five ditto ditto	.	1	6
4	Twenty splendid varieties of tall quilled Asters	.	4	6
5	Ten ditto ditto	.	2	6
6	Five ditto ditto	.	1	6
7	Ten ditto globe-flowered Asters	.	2	6
8	Five ditto ditto	.	1	6
9	Ten ditto new pyramidal Asters	.	2	6
10	Five ditto ditto	.	1	6
11	Six extra fine new double Wallflower	.	2	6
12	Sixteen finest selected double dwarf Rocket Larkspurs	.	3	0
13	Eight ditto ditto	.	1	6
14	Six ditto tall Rocket Larkspurs	.	1	6
15	Twelve splendid varieties of Zinnia elegans	.	3	0
16	Six ditto ditto	.	1	6
17	Ten beautiful new varieties of Scabious	.	2	6
18	Five ditto ditto	.	1	6
19	Ten ditto Sweet Peas	.	2	6
20	Five ditto ditto	.	1	6

EDWARD GEORGE HENDERSON and SON will forward, post free, upon application, their new Spring Catalogue for 1852, containing full descriptions with prices of their principal stock, embracing all the newest and most rare Plants.

The following NEW PLANTS are recommended for cultivation.

Abronia umbellata, a very beautiful trailing plant, 2s. 6d.

Achimenes Margaretta, large white, 5s.

Ageratum conspicuum, white, a fine variety, 2s. 6d.

Balsamina latifolia alba, distinct and good clear white, 7s. 6d.

Bertolonia maculata, pretty free flowering ornamental foliage stove plant, 3s. 6d.

———— *marmorata*, ditto, 3s. 6d.

Calceolaria Crimson King, distinct colour plum crimson, small.

———— *Shankleyana*, an exceeding fine crimson variety for bedding, 1s. 6d.

———— species from California, this variety has flowers of a beautiful citron colour, abundant flower, indeed the plant has been covered with flowers all the winter, 2s. or 18s. per dozen.

Campanula coronata, very distinct white, 3s. 6d.

Deutzia gracilis, true, a lovely spring flowering plant, 3s. 6d.

Dianthus fulgens, 2s., bright crimson single flower, very attractive bedding plant.

Dipteracanthus albiflora, a new variety, with white flower, 5s.

Gaillardia semi pleno, distinct fine variety, 1s.

Gesneria zebrina splendens, handsome marked foliage, 5s.

———— *compacta*, very distinct and dwarf, 10s. 6d.

Heliotropium paniculatum, fine trusses of flower, 7s. 6d.

Hesperis matronalis rubra pleno (crimson rocket), splendid, 2s., or 18s. per dozen.

Lantana purpurea, fine rich colour, 3s. 6d.

Lobelia erinus racemoides, the finest variety, deep blue.

———— new shrubby species, with splendid foliage, 15s.

Lychnis dioica alba pleno, fine large white for bedding, 3s. 6d.

Passiflora Decaisiana, fine and new, 10s. 6d.

———— *Felimentosa*, new blue, 7s. 6d.

———— *Kermesina major*, fine, 7s. 6d.

Petunia meredes, rose with centre, good habit; fine, 5s.

———— *striata superba*, rosy crimson with clear white stripes, 7s. 6d.

Phlox Drummondii Mayii, fine striped clear white and rose; constant; 7s. 6d.

———— *Thompsonii*, rich maroon crimson, 5s.

Penstemon azureus, true, this variety having dark blue flowers, 2s.

———— *Californicus*, a new shrubby species, described as being a very fine thing.

———— *ovatus*, fine light blue, 1s. 6d.

Rose Fortunii, a new variety, very distinct, like the Banksian in foliage and growth, 7s. 6d.

Statice Halfordii, one of the best, 7s. 6d.

Scutellaria Macrantha, a beautiful dwarf bedding plant, strong, 3s. 6d.

Tropæolum Triumph de Gand, a very splendid variety, orange scarlet, likely to prove a very useful bedding plant, 5s.
Viburnum suspensum, fine strong plants 2 feet high, 10s. 6d. to 15s.
Vriesia splendens (*Tillandsia splendens*) 3s. 6d.

GREEN'S SCARLET KING DAHLIA.

A few strong Plants in 48-sized pots at 12s. 6d.
 Post-office Orders to the Agent, GEORGE GLENNY, 84, Fleet Street.
 All other Plants are in the Trade.

PLANTS CARRIAGE FREE TO ANY PART OF THE
 UNITED KINGDOM.

MESSRS. HARRISON & Co.

Beg to inform their numerous Patrons and the Public, that their Annual Catalogue of Select Florists' Flowers and Herbaceous Plants, appeared in the MARCH Number of this work, from which they can make selections of any Plants of those classes they may require. Should any lady or gentleman wish for any of the Lists to circulate amongst their friends, Messrs. HARRISON and Co. will be most happy to forward them.

All orders to the amount of two pounds or upwards, *containing a remittance*, will be forwarded, carriage free to any part of the Kingdom, and also a Plant or two added gratis in proportion to the extent of the order.

All orders of less extent than two pounds, will have ample in Plants added to compensate for the cost of carriage.

HARRISON & Co.

Can supply nearly all the best kinds of BEDDING PLANTS at from 2s. per dozen to 3s. 6d. and 5s.

Richmond, near London,
May 24, 1852.

FOUNTAINS.

MR. SEELEY

Having printed a LIST of some small designs of FOUNTAINS suitable for Conservatories, will be happy to forward a copy to any Gardener requiring such an ornament.

Nos. 1-4, Keppel-row, New Road, Regent's Park, London.

HOLLOWAY'S PILLS.

HOLLOWAY'S PILLS THE BEST AND MOST EFFICIENT REMEDY TO CURE DROPSY.—Extract of a letter from Mr. P. Williams, dated "Milford, March 1, 1852.—To Professor Holloway—Sir, Feeling grateful for the benefit my wife has derived by the use of your Pills, I consider it my duty to inform you of it. Soon after the birth of her last child her feet and ancles began to swell, and afterwards her whole body, strongly indicative of dropsy. This occurring at the turn of life, I obtained the best medical advice, but her health continued to decline. I then tried your Pills, which I am happy to say have restored her to sound and perfect health."

Sold by all Druggists, and at Professor Holloway's Establishment,
244, Strand, London.

CHOICE BARGAINS, FLOWERS OF ALL HUES.

JOSEPH HENRY KNIGHT,

FLORIST, &c.

BATTLE, SUSSEX,

Is now sending out strong Plants in pots to bloom this season. Carriage paid to London as under.

CHOICE HARDY HERBACEOUS PLANTS, from his extensive collection, above 2000 kinds. 100 fine varieties, very fine, none but real showy handsome kinds, included for 25s., 50 ditto for 14s., 25 ditto for 8s.

J. H. K. has also been successful in saving a quantity of Seed of the above, which he is sending out in packets, fully described, post free, 100 kinds for 10s., 50 ditto for 6s., 25 ditto for 3s., if sown now, will bloom next season; also confidently recommended in sealed packets, warranted superior saved Seed.

PANSEY, saved from 150 varieties, including many new ones of last year, comprising every shade of colour, 1s. per packet.

ANTIRRHINUM, saved from 70 kinds, many new, of all colours, selfs, mottled, striped, spotted, &c., 6d. per packet.

HOLLYHOCK, saved from a first rate collection, 100 seeds, 1s.

PETUNIA ditto, 6d.

ANEMONE ditto, 6d.

ALSTROMERIA, 20 varieties, mixed, 6d.

SWEET WILLIAM, 50 kinds, 6d.

VERBENA ditto, 6d.

Post-office Orders payable at Battle, in Sussex.

ADVERTISEMENTS.

1852.

E. G. HENDERSON & SON,

WELLINGTON ROAD NURSERY, ST. JOHN'S WOOD, LONDON,

Are now prepared to forward by post, CINERARIA SEED, saved from the best formed Flowers, such as Cerito, Lady Hume Campbell, Adela Villiers, Pauline, Rosy Morn, Marianne, David Copperfield, Effie Deans, Carlotta Grisi, Prima Donna, &c. &c.

E. G. H. and SON also beg to say that the varieties of CALCEOLARIAS, from which the Seed is saved, can now be seen in full bloom at the Nursery. Early orders are requisite to insure this Seed, which will be sent out in July at 5s. per packet.

Catalogues for this season will be forwarded, post free, upon application.

FLOWERS OF ALL HUES.

JOSEPH HENRY KNIGHT,

FLORIST, &c.

BATTLE, SUSSEX,

Is now sending out the following CHOICE PLANTS and SEEDS. Post Free.

CHRYSANTHEMUMS, choice show varieties, 5s. per dozen; ditto very choice Pompon or Lilliputian kinds, 5s. per dozen; PHLOXES, choice kinds, 5s. per dozen; FUCHSIAS, ditto, 5s. per dozen; NEW BELGIAN DAISIES, 12 distinct kinds, 5s.; the above five dozen choice Plants for 1l., in young healthy Plants true to name, confidently recommended; they can be sent, Post Free, without risk of perishing. Also, CHOICE SEEDS: Pansey, 150 named sorts, 1s.; Antirrhinum, from 70 ditto, 6d.; Hollyhock, very superb, 100 Seeds, 6d.; Anemone, 50 varieties, 6d.; Sweet William, 50 varieties, 6d. Also, with full descriptions for present sowing to bloom next season, post free: 50 choice kinds Hardy Perennial Seeds, 6s.; 30 ditto, 4s.; 25 ditto, 3s.; 12 ditto, 1s. 6d.

Post Office Orders payable at Battle, in Sussex.

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SUPERB SEEDLING FUCHSIAS.**LUCOMBE, PINCE, AND Co.**

Intend sending out, on the 5th of July next, the following very beautiful

NEW FUCHSIAS:

APOLLO (Pince's).—Rosy tube and sepals, well reflexed; corolla purplish lilac, finely expanded, 10s. 6d.

ASPASIA (Pince's).—Scarlet tube and sepals, finely reflexed; corolla beautiful blue, 10s. 6d.

PRINCEPS (Pince's).—Brilliant scarlet-lake tube and sepals, reflexed to a greater extent than any other Fuchsias, which produces a novel and most attractive effect; corolla deep blue, 10s. 6d.

L., P., and Co., as the raisers of "Exoniensis" and "Corallina," which gave such general satisfaction, can with confidence recommend the above to all cultivators of this favourite flower, having fully tested their qualities last season, during the whole of which, in their new Show House, they were seen and admired by numerous visitors. They possess waxy firmness, and are particularly smooth and fine in quality, void of all coarseness, of excellent habits, and blooming most profusely; indeed, the high character which these Fuchsias have obtained, from their having been so generally seen in all their stages, render it unnecessary to say any more in their praise.

P.S.—Allowance to the Trade, one over when three of each are ordered.

CHOICE CINERARIA SEED.

LUCOMBE, PINCE, and Co. have now ready for sending out some exceedingly fine CINERARIA SEED, carefully saved from a very select collection of all the newest and finest varieties of the season, in packets, sealed and warranted by them, free by post, 2s. 6d. each.

L., P., and Co. have also some very

SUPERIOR CALCEOLARIA SEED,

Saved from well-shaped, highly coloured, well marked Flowers, which they can strongly recommend; in packages, sealed and warranted by them, free by post, 2s. 6d. each.

L., P., and Co. have great pleasure in stating that they have received numerous testimonials of the satisfaction which their Calceolaria and Cineraria Seeds gave last season, and they respectfully solicit early orders, as strong Plants for early flowering will be obtained by sowing now.

BEAUTIFUL NEW PLANT,**ÆSCHYANTHUS SPLENDIDUS.**

LUCOMBE, PINCE, and Co. beg leave to inform the Public that they purpose sending out, on the 5th of July next, strong healthy Plants of their much admired

NEW HYBRID *ÆSCHYNANTHUS*,

which they can with full confidence recommend to all cultivators as a Plant that cannot fail to give general satisfaction. Excellent drawings of it will be found in the *Gardeners' Magazine of Botany*, December, 1851; and in the *Floricultural Cabinet* of last month, to which they respectfully refer, and also invite attention to the following remarks:

"A hybrid production, and a very beautiful one. It is, no doubt, the finest of its race; which, as is well known, now contains many very splendid imported species. It will prove a most useful ornamental Plant of very easy culture, and the brilliance of its large clusters of Flowers will make it conspicuous amongst the most showy Plants."—*Gardeners' Magazine of Botany*, December, 1851.

"The species under consideration ('*Æschynanthus splendidus*'), is one of the most recently introduced, and certainly one of the very best."—*Gardeners' Journal*, March 13, 1852.

Price 21s. each. Allowance to the Trade, one over when three are ordered.

Exeter Nursery, Exeter, June 12.

HOLLOWAY'S OINTMENT AND PILLS.

HOLLOWAY'S OINTMENT AND PILLS, A MOST EXCELLENT REMEDY FOR ABSCESSSES AND OLD WOUNDS.—

Thomas Edwards, a labourer in Portsmouth Dockyard, received a severe hurt in his thigh by a piece of timber falling on him. An abscess formed in consequence of the injury, which defied the most eminent surgeons to heal, and he was consequently pronounced incurable, and put on the superannuation list. Being now at liberty to try other remedies, he commenced using Holloway's Ointment and Pills, which have so effectually cured him that he enjoys good health, and is as well able to work as any man.

Sold by all Venders of Medicine; and at Professor Holloway's Establishment, 244, Strand, London.

FOUNTAINS.

MR. SEELEY

Having printed a List of some small designs of FOUNTAINS suitable for Conservatories, will be happy to forward a copy to any Gardener requiring such an ornament.

Nos. 1-4, Keppel-row, New Road, Regent's Park, London.

MESSRS. HARRISON & Co.

NURSERY AND SEEDSMEN,

RICHMOND, NEAR LONDON,

Will forward all orders amounting to two pounds and upwards, containing a remittance,

CARRIAGE FREE TO ANY PART OF THE KINGDOM.

They beg to inform their numerous Patrons and the Public, that their Annual Catalogue of Select Florists' Flowers and Herbaceous Plants, appeared in the MARCH Number of this work, from which they can make selections of any Plants of those classes they may require. Should any lady or gentleman wish for any of the Lists to circulate amongst their friends, Messrs. HARRISON and Co. will be most happy to forward them.

They also offer at the annexed cheap rate the following Plants, and when the selection is left to Harrison and Co., care will be taken to send only such kinds as will ensure entire satisfaction.

GLOXINEAS, a fine collection, plants strong, coming into bloom, 15s. to 21s. per dozen.

ACHIMENES, ditto, ditto, 12s. to 18s. per dozen.

GREENHOUSE PLANTS, 12 fine selected, 10s. to 15s. per dozen.

CHRYSANTHEMUMS, fine show varieties, containing last season's newest, 9s. per dozen.

DITTO, finest older kinds, 5s. per dozen.

MINIMA DITTO, finest of last season's flowers, strong plants, 9s. per dozen.

DITTO DITTO, older fine kinds, 5s. per dozen.

FUCHSIAS, best varieties out, such as Prince Arthur, Globosa magnifica, Voltigeur, Hebe, &c. &c., 12s. to 18s. per dozen.

DITTO, finest older kinds, 5s. per dozen.

BEDDING GERANIUMS, best varieties, 9s. per dozen.

DITTO of previous years, 5s. per dozen.

HERBACEOUS PLANTS, in pots ready for transmission, including the best varieties in Campanulas, Potentillas, Delphiniums, Aconitums, Dracocephalums, &c. &c., 6s. 9s. and 12s. per dozen.

HARDY FERNS for Rockwork, fine plants of nearly every hardy species, 9s. per dozen.

DEUTZIA GRACILIS, a beautiful hardy shrub, bearing a profusion of lovely white flowers, forces well, 1s. 6d. and 2s. 6d. each.

ESCALLONIA MACRANTHA, hardy shrub, crimson flowers, 1s. 6d. each.

The immense demand which H. and Co. was patronized with for the beautiful varieties of

NEW BELGIUM DAISIES,

has induced them to offer the public these charming flowers at the annexed REDUCED PRICE for established Plants.

50 of the BEST VARIETIES, 18s.

25 ditto ditto 10s.

12 ditto ditto 5s.

6 ditto ditto, sent free by post, for 3s.

CATALOGUES of Stove, Greenhouse, Hardy Herbaceous Plants, and of all kinds of Florist's Flowers can be supplied. Post Free.

ADVERTISEMENTS.

1852.

SUPERB DOUBLE HOLLYHOCKS.

WILLIAM CHATER,

SAFFRON WALDEN,

Respectfully informs the Public that his unequalled collection of this magnificent flower is now in bloom, free to the inspection of all visitors on any day excepting Sundays.

W. C. challenges to show 12 varieties sent out by him, against any other 12 varieties which can be produced for 10*l*.

Saffron Walden Nurseries,

July 24, 1852.

TO FLORISTS, AMATEURS, &c.

L. VAN HOUTTE,

FLORIST, GHENT,

Offers CALCEOLARIA SEED, saved from a superb collection, warranted to comprise all his finest and newest varieties, at 5*s*. per sealed packet. To be had in London of Mr. J. CARTER, 238, High Holborn.

TO GENTLEMEN'S GARDENERS, AMATEURS, IMPLEMENT AND TOOL MAKERS, NUR- SERYMEN, AND FLORISTS.

Fruit, Flowers, Plants, and Vegetables, for opinion, Books or other subjects for notice, and all communications for *Glenny's Garden Almanack* should be addressed to the Editor, 84, Fleet-street, London, as soon as possible.

PLANT'S NEW POTENTILLAS.

INCOMPARABLE and FLORIBUNDA BICOLOR, are now in splendid bloom, two of the finest hybrids ever offered. Flowers may be had free by post for one stamp. It is expected to have stock enough to let out in October next.

CALCEOLARIAS now challenge any comparison with the very best striping of the Carnation. A box of blooms for six stamps.

HYBRID ALSTROEMERIAS. These are now a complete mass of bloom, much greater variety and harder in constitution than the original Chilean ones. Heads of bloom immense, having from one to two hundred flowers on each. These should be in every pasture, October is the time for planting.

Cheadle, Staffordshire, July 1852.

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BULBOUS ROOTS.**WILLIAM HAMILTON,**

SEEDSMAN, &c.

156, CHEAPSIDE, LONDON,

Begs to inform his customers and others, that OCTOBER is the best month for planting

BULBOUS ROOTS,

and respectfully solicits the favour of early orders. His stock has this year been received in the finest condition, and cannot fail to give every satisfaction to purchasers.

Those who have not an opportunity of calling at W. H's. Establishment, may rely upon having their orders, if sent by post or otherwise, punctually attended to, and executed with articles of the very best description.

The following are a few of his prices, but those wishing to have a larger variety to select from, may have his *Catalogue* forwarded by post on application.

Crocus, common mixed, 1s. per 100.

—, superior Dutch mixtures, 1s. 6d. per 100.

—, in separate colours, 1s. 6d. to 2s. per 100.

—, very fine large yellow, 2s. 6d. per 100.

Snowdrops, double and single, 2s. per 100.

Tulips, for pots or border, early and late, 1s. to 2s. 6d. per dozen.

Narcissus, Soleil d'Or, paper-white and double-Roman, 3s. per doz.

—, Grand Monarque, and Grand Primo, (very large), 6d. each.

Hyacinths, excellent mixtures,

suitable for pots, or the open border, 3s. 6d. per dozen.

—, named for glasses, or pots, 6d. and upwards.

Gladiolus, some very fine kinds.

Jonquils, double and sweet-scented, 1s. 6d. and 2s. per dozen.

Lilium Lancifolium album, 1s. each.

—, punctatum, 2s. 6d. to 5s. each.

—, rubrum, 2s. 6d. to 5s. 6d. each.

Lilium Longiflorum, 6d. each.

Lilium Japonicum (true), 5s. each.

Ixias, Irises, Ranunculus, Anemones, and all other kinds of Roots.

GLASS DISHES, with six superior Hyacinths ready planted in moss, and which are easily transmitted to the country without injury, 5s. The price increases from 5s. to 10s. 6d., according to the size of the dish, and the number of Hyacinths.

The above are all warranted fine, and will be delivered in the best possible condition, with extra roots to compensate for carriage.

W. H. also offers a very superior collection of CARNATIONS and PICOTEES, from 1s. 6d. per pair, and upwards, a Catalogue of which may be had on application.

Standard and half-standard roses, 15s. to 30s. per dozen.

N.B.—CALCKOLAREA SEED, saved from the choicest show flowers, 2s. 6d. per packet.

156, Cheapside, London.

BASS AND BROWN

Have the pleasure to announce to their numerous patrons, that they are now sending out the following **NEW** and **SUPREB GERANIUMS** of last season, raised by BEEK, HOYLE, DOBSON, and FOSTER.

For varieties of previous introduction, see Catalogue just published.

The Collection may be had for 3l. 15s., any 12 for 50s., or left to our selection for 44s.

	s.	d.		s.	d.
Ariadne, F.	5	0	Herald, H.	3	6
Ambassador, D.	3	6	Incomparable, D.	3	6
Arethusa, D.	3	6	Lavinia, F.	3	6
Chieftain, H.	3	6	Magnet, H.	7	6
Colonel of the Buffs, H.	5	0	Mochana, H.	3	6
Commissioner, B.	3	6	Monteith, F.	3	6
Elise, H.	5	0	Painter Improved, B.	3	6
Enchantress, F.	5	0	Purple Standard, F.	5	0
Exhibitor, B.	3	6	Rubens, F.	3	6
Ganymede, H.	5	0	Shylock, F.	5	0
Gem, D.	3	6			

FANCY GERANIUMS.

The 12 varieties may be had for 42s.

	s.	d.		s.	d.
Ambassador, H.	3	6	Gipsy Queen, Ayres	5	0
Beauty of St. John's Wood, H.	3	6	Miranda, Ayres	5	0
Caliban, Ayres.	5	0	Othello, H.	3	6
Captivation, Ambrose	5	0	Princess Royal, H.	3	6
Electra, Ayres	2	6	Richard Cobden, Ambrose	5	0
Formosissima, Ayres	5	0	Superba, Ambrose	5	0

NEW SCARLET AND PINK FLOWERING HORSE-SHOE LEAVED GERANIUMS.

	s.	d.		s.	d.
Amazon, Low.	2	6	Odoratissima Grandiflorum, H.	2	6
Defiance, A. H.	2	6	Shrubland Pet, H.	3	6
Hendersonii, H.	2	6			
Mountain of Light, Lee	3	6			

NEW STOVE and GREENHOUSE PLANTS, ANTIRRHINUMS, AZALEA INDICA, CAMELIAS, CHRYSANTHEMUMS, CINERARIAS, FUCHSIAS, PETUNIAS, ROSES, SELECT EVERGREEN and FLOWERING SHRUBS, HARDY ORNAMENTAL CLIMBERS, HARDY HERBACEOUS PLANTS, CHOICE FRUIT TREES, RHUBARB, SEA KALE, GIANT ASPARAGUS, &c.

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Our descriptive *Spring Catalogue of Seeds and Plants* will be ready early in January, it will contain a descriptive list of the *Newest and Best Flower, Vegetable, and Agricultural Seeds.*

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They also offer at the annexed cheap rate the following Plants, and when the selection is left to Harrison and Co., care will be taken to send only such kinds as will ensure entire satisfaction. Allowance to the Trade.

GLOXINEAS, a fine collection, plants strong, 15s. to 21s. per dozen.

ACHIMENES, ditto, 8s. to 12s. per dozen.

GREENHOUSE PLANTS, 12 fine selected, 10s. to 15s. per dozen.

CHRYSANTHEMUMS, finest show varieties, newest, 9s. per dozen.

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MINIMA DITTO, finest of last season's flowers, strong plants, 9s. per dozen, others, 5s. per dozen.

FUCHSIAS, best varieties out, such as Prince Arthur, Globosa magnifica, Voltigeur, Hebe, &c. &c., 9s. to 12s. per dozen. Older sorts, 5s. per dozen.

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PELARGONIUMS, the finest varieties of previous years to 1852, from 5s. to 15s. per dozen.

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HARDY FERNS for Rockwork, fine plants of nearly every hardy species, 9s. per dozen.

DEUTZIA GRACILIS, a beautiful hardy shrub, bearing a profusion of lovely white flowers, forces well, 1s. 6d. and 2s. 6d. each.

ESCALLONIA MACRANTHA, hardy shrub, crimson flowers, 1s. 6d. each.

CARNATIONS and **PICOTEEs**, 12s. to 15s. per dozen pairs.

The immense demand which H. and Co. was patronized with for the beautiful varieties of

NEW BELGIUM DAISIES,

has induced them to offer the public these charming flowers at the annexed REDUCED PRICE for established Plants.

50 of the BEST VARIETIES, 18s.

25 ditto ditto 10s.

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CATALOGUES of Stove, Greenhouse, Hardy Herbaceous Plants, and of all kinds of Florist's Flowers can be supplied. Post Free.

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Beg to inform their Patrons that the undermentioned **DESCRIPTIVE CATALOGUES** can now be had.

General and Supplementary Rose Catalogues, for 2 stamps.

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Begs to inform the admirers of that very popular Flower the **PINK**, he is now ready to send out good strong Plants of his two fine Seedlings at 5s. per pair, the usual allowance to the Trade; they are two fine large Flowers, fine round petals, quite rose-leaved; they have a fine heavy solid band of beautiful dark purple.

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—Extract of a letter from Mr. D. E. Evans, commercial traveller, Chester, dated September 7, 1852. "To Professor Holloway.—Sir,—For a considerable period I suffered dreadfully from bile, indigestion, and disordered stomach. In the hopes of obtaining relief I took a great variety of medicine, but all proved of no avail. I was, however, recommended by Mr. Hughes, of Harlech, to try your pills, and it is with pleasure that I should inform you that they soon restored my appetite, and I now enjoy the very best of health.

Signed, **D. E. EVANS.**

Sold by all Druggists; and at Professor Holloway's Establishment.
244, Strand, London.

NEWLY IMPORTED DUTCH BULBS.

HARRISON & Co's

CATALOGUE of HYACINTHS, TULIPS, NARCISSUS, and BULBOUS Roots in general is now ready, and can be had, post-free, on application. Something given to compensate for cost of carriage.

N.B. The NEW VERBENAS of this year's sending out can be supplied very cheap; also Annual Seeds for autumn sowing, to bloom early in spring.

In the Press, and will be published November 1st, price 1s., the Seventh Yearly Edition, 12mo, 106 pages, with a beautifully coloured large folding plate of the VICTORIA REGIA, and several woodcuts,

HARRISON'S

GARDENERS' & NATURALISTS' ALMANACK FOR THE YEAR 1853.

It will include original and practical matter, closely printed, on subjects connected with FLORICULTURE, HORTICULTURE, and NATURAL HISTORY, with lists of the best FLOWERS, FRUITS, and VEGETABLES; Houses of Peers and Commons, Nurserymen, Useful Tables, Astro-Meteorology, &c. Advertisements addressed to Mr. HARRISON, Larkfield-lodge, Richmond, Surrey. Terms: one page, £1 10s.; half a page, £1; quarter, 10s.

London: WHITTAKER and Co.; and may be had of any bookseller.

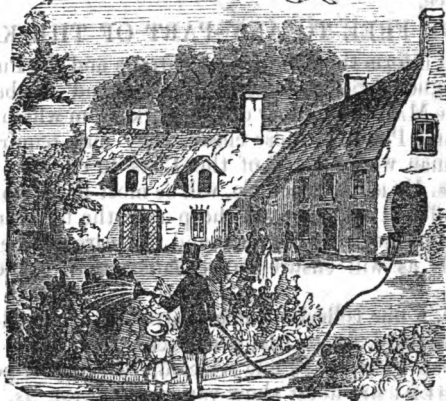
NOTICE TO ADVERTISERS.

For the advantage of our friends, we deem it necessary they should understand, that although the sale of our MAGAZINE exceeds by a very considerable number that of any other similar publication, yet the charges for advertisements are *lower*, as may be seen by comparison with the following scale of

TERMS.

	£	s.	d.
Whole Page	1	15	0
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Eight Pages	2	2	0

* * Advertisers should send their Communications by the Twentieth Day of the Month, either to us at Richmond, or to our Printer.



GUTTA PERCHA TUBING

FOR

WATERING GARDENS, &c.

The Gutta Percha Company have been favoured with the receipt of the following TESTIMONIALS:—

From Mr. J. FARRAH, Gardener to BOSWELL MIDDLETON JALLAND, Esq., of Holderness-house, near Hull.

"I have had 400 feet of your Gutta Percha Tubing (in lengths of 100 feet each, with Union Joint,) in use for the last twelve months for watering these gardens, and I find it to answer better than anything I have ever yet tried.

"The pressure of the water is very considerable, but this has not the slightest effect on the Tubing.

"I consider this Tubing to be a most valuable invention for Gardeners, inasmuch as it enables us to water our gardens in about one-half the time, and with one-half the labour formerly required."

From J. H. ECCLES, Esq., Surgeon, Plymouth.

"The Tubing I have found most convenient in watering my garden, and doubt not that it may be substituted for lead pipes, in most instances, with great advantage, as well on account of its remaining unchanged by the action of acids, &c., as by its power of remaining uninjured by the action of intense cold."

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The Gutta Percha Company, Patentees, 13, Wharf-road, City-road, London.

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1852.

Established nearly Half a Century.

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AGRICULTURAL MAGAZINE, PLOUGH, AND FARMERS' JOURNAL.

The Farmers' Journal, Farmers' Chronicle, and Plough, are Incorporated with the "Agricultural Magazine."

The Magazine has a very extensive circulation amongst the most eminent Agriculturists, Clergy, Magistrates, Members of the Legal and Medical Professions, Land and Estate Agents, &c., of Great Britain, as also the principal Farmers' Clubs and Agricultural Societies throughout the United Kingdom, beside the Continents of Europe, America, Australia, &c., &c. It contains, moreover, a vast amount of useful information to the amateur as well as practical farmer, together with a variety of useful recipes, &c., for the cure of the many diseases to which cattle, sheep, &c., are subject. The Publication has been established now nearly half a century, and is the oldest serial connected with farming pursuits.

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Just Published, price 1s.,

THE GARDENERS' ALMANACK FOR 1853.

Edited by G. W. JOHNSON, Esq.

Besides the usual contents of an Almanack, it contains Lists of the best Florists' Flowers and Fruits ; a List of the chief Florists and Nurserymen of the United Kingdom, and very copious practical instructions in all departments of Gardening, arranged alphabetically to facilitate reference.

Published by the Stationers' Company, Ludgate-street, London.

NOTICE !—Shortly will be published,

MESSRS. HARRISON & Co.'s

CATALOGUE of HARDY, HERBACEOUS, and ALPINE PLANTS, containing upwards of 1,300 species and varieties, with the Scientific and English Names, Synonyms, &c. ; Authorities, Natural Order, Height of Growths, Time of Flowering, Colour of Flower, Native Country, and Year of Introduction to each.

The whole of those enumerated in the Catalogue are in the cultivation of Messrs. HARRISON and Co., Richmond, near London.

SUPERB MINIMA (or Pomponne) CHRYSANTHEMUMS, &c.

HARRISON and Co., of Richmond, near London, can supply all the best varieties of the above, as well as those of the Large Flowered Class, at very reasonable prices. Also, the Winter-blooming Tree Carnations, Scarlet Geraniums, and Fuchsias.

All Packages sent, free of carriage, to London ; and when the quantity of Goods amount to the value of £2, free of carriage all the way. In all cases gratis plants are sent.

They can also supply MUSHROOM SPAWN, of most excellent quality.

NEW JAPAN LILIES,

Too, viz., *L. lancifolium album*, *L. lancifolium rubrum*, and *L. lancifolium punctatum*, at very low prices. These flourish when grown in the open ground.

TO CORRESPONDENTS.

Received too late. "W. M.," and "A Midland Reader." Give us your address and we will write by Post.

HORTICULTURAL SOCIETY, 21, REGENT-STREET, OCTOBER 16TH.—The new regulations of giving prizes, &c., for articles exhibited and judged meritorious, came into operation on this occasion, and the result was an excellent show. (See Fruits, &c., on Wrapper of this Number.) Of Flowers, the following were exhibited:—Of Orchids, a fine specimen of *Vanda cœrulea*, than which we know of no plant of its colour more striking at this season, was shown by Messrs. Lucombe and Pince, to whom a Knightian was awarded for it, and a Banksian Medal was assigned to Mr. Woolley, for a smaller example of the same showy plant, but not quite the same variety as the former. This last-named exhibitor also sent the new white *Trichopilia albidia*. The Rev. Mr. Ellis, of Hoddesdon, sent *Dendrobium flexuosum* in the way of *D. longicornu*, with white flowers striped on the lip with orange. Messrs. Lane had an *Epidendrum*, one of Mr. Skinner's importations, and apparently allied to *E. fragrans*. Of other plants, Messrs. Standish and Noble contributed a new evergreen shrub, *Skimmia japonica*, bearing a profusion of beautiful red berries, which, rising in clusters above the handsome foliage, are exceedingly attractive at this season. Along with it also came small examples coming into blossom, showing that only a short time is required to see it in all its beauty of both flower and fruit. It is believed to be hardy, but of this further proof is required. A Knightian Medal was awarded it. A charming *Gesnera*, with cherry-coloured flowers having a pale throat, was exhibited by Mr. Glendinning, of Turnham-green. Judging from its foliage and general character, it appeared to be a cross between *G. discolor* and *purpurea*. A Certificate of Merit was awarded it.—Mr. Snow sent cut specimens of *Aralia japonica*, from a plant 12 feet high, which is at present flowering in great profusion in the open shrubbery at Earl de Grey's place, in Bedfordshire.—Mr. Cole, gardener to H. Colyer, Esq., produced *Medinilla Sieboldii* and a well-grown *Gusmania tricolor*. These, however, came too late for a prize, as did also a pretty variegated plant from Messrs. Low, of Clapton, called *Plectranthus concolor picta*. It is a hothouse plant, with tender pale green leaves, prettily blotched with deep brown.—Mr. Francis furnished charming cut flowers of the following Roscs, from his nursery at Hertford, viz.,—Bourbon Queen, Jacques Lafitte, Mrs. Bosanquet, La Reine, Devoniensis, Géant des Batailles, Bougère, Belle Allemande, Rambuteau, Elise Sauvage, Dr. Marx, Marquis of Ailsa, Safranot, Comte de Paris, Souvenir de la Malmaison, Baronne Prevost, Standard of Marengo, Marquis Boccella, Cloth of Gold, and Dupetit Thouars.—A bouquet of hardy annuals was contributed by Mr. Wrench, of London-bridge; and Mr. Mills sent a half-ripened Cucumber a yard in length, and about three inches in diameter.—From the Society's garden came, among other plants, the pretty little winter Violet Grass (*Cochlearia acaulis*), which, if sown in an American border or similar place, grows and blooms from this season up to Christmas. A little patch of it taken up and put in a saucer in water will also keep flowering a long time, rendering it an interesting plant for the drawing-room window. Along with it were *Solandra lævis*, fine examples of the useful *Sedum Sieboldii*, the Golden *Lachenalia* (*L. aurea*), a new and very handsome species, producing long spikes of bright yellow tubular flowers; two Bromeliaceous plants, a red and a white flowered kind, from M. de Jonghe of Brussels, a small blossomed yellow *Chrysanthemum* called *Hendersonii*, which is valuable for its earliness, anticipating, as it does, the *Chrysanthemum* season by some weeks; a branch bearing half-ripe fruit of *Benthamia fragifera* from the conservatory, and a cut spike of the Peruvian Bark-plant (*Cinchona calisaya*), whose flowering in the garden for the first time in Europe has recently excited so much interest. Associated with those were also a collection of hardy annuals, in the shape of cut flowers, placed in pots. Among more remarkable kinds were blooms of *Tropæolum Lobbianum*, whose brilliant orange scarlet was so striking as to attract everybody's attention; *Tagetes signata*, a little known and rather handsome kind; *Cosmos bipinnata atropurpurea*, with purple flowers, somewhat resembling those of a single Dahlia; the Zebra Mallow, a beautifully striped sort; *Phlox Drummondii*, one of the most useful annuals for autumnal decoration; *Lupinus pubescens* and *Hartwegii*, and *Calceolaria chelidonioides*, a variety introduced by I. Anderson, Esq., of Edinburgh, and which promises to be an exceedingly useful and pretty kind. The next Meeting will be held on November 2nd, and by an introduction, or a note, from a Fellow of the Society, any person is admitted.

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HERBACEOUS PLANTS, in 100 splendid kinds, for 50s.—50 varieties for 27s. 6d.

DITTO, of the newest and finest, in 100 sorts for 75s.—50 kinds for 40s.

CAMPANULAS, in 12 sorts, for 7s. 6d.—24 kinds, 14s.—or 36 varieties for £1.

IRIS, in 12 sorts for 10s.—24 kinds, for 17s. 6d.—36 varieties for 27s. 6d.

PÆONIAS, in 12 splendid sorts, 12s.—24 ditto, for 20s.

POTENTILLAS, 12 finest sorts, 10s.—24 varieties, 17s. 6d.

CINERARIAS, in 12 fine sorts, for 10s.—ditto, extra fine, 15s. and 18s.

BEDDING GERANIUMS, best varieties, 5s. to 9s. per dozen.

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